



RURAL
WORLD

COLMAN'S RURAL WORLD

DEVOTED TO AGRICULTURE HORTICULTURE HORSES CATTLE SHEEP SWINE ETC.

ESTABLISHED 1848

Established 1848.

ST. LOUIS, MO., WEDNESDAY, MAY 8, 1901.

Volume LIV., No. 19

COLMAN'S RURAL WORLD

NORMAN J. COLMAN, Editor.
LEVI CHURCH, Business Manager.

Published every Wednesday, in Chemical building, corner of Eighth and Olive streets, St. Louis, Mo., at one dollar per year. Eastern office, Chalmers D. Colman, 626 Temple Court, New York City. Advertisers will find the RURAL WORLD the best advertising medium of its class in the United States. Address all letters to COLMAN'S RURAL WORLD, Chemical Building, St. Louis, Mo.

While the RURAL WORLD is published at one dollar a year, it has temporarily allowed old subscribers to send actually NEW OR TRIAL subscribers with their own subscriptions at fifty cents a year, in order to largely increase the circulation and influence of the paper. This price is less than the cost of the white paper, presswork, folding, wrapping, mailing and preparing the postage, saying nothing of any other of the large expenses of maintaining offices, paying salaries and conducting such a paper in a large city. Renewals, unless accompanied by one or more NEW subscribers must be at one dollar a year. All names are dropped as soon as subscriptions expire. The month named on the address tag, pasted on each issue, shows the month subscriptions expire, and renewals should be made two or three weeks before, so that names shall not drop out of list. It is gratifying to the proprietor to be able to state, in his half century's experience in conducting this paper, it has never enjoyed the patronage and prosperity it now does. Its circulation is increasing in a wonderful degree, and its advertising patrons, many of whom have used its columns for a quarter or a third of a century, are more than pleased with results. Let all our friends unite and press forward in extending its sphere of influence. It will do for others what it is doing for you, so get others to join the great RURAL WORLD army and receive the same benefit.

The summer meeting of the Missouri Horticultural Society will be held at New Haven, Mo., June 4-6, 1901. Further announcement will be made in our next issue.

By the statement that appears on page eight of this issue, it appears that the Illinois Legislature just adjourned made appropriations amounting to over \$300,000 per annum for the encouragement and development of the agricultural interests of that state. Surely the farmers of Illinois have little to complain of as to the treatment of their interests by the Legislature.

A TENNESSEE FARMERS' MEETING.

The East Tennessee Farmers' Convention, to be held at Knoxville, Tenn., May 21-23, will be an occasion that ought to be largely attended, judging by the program that has been arranged by the farmers of that state. We regret not being able to accept the invitation of Prof. Andrew M. Soule, the assistant secretary, to attend. We would not only be interested in the program with which such men as former Governor Hoard, Prof. Thomas Shaw, Geo. Wm. Hill, Prof. Willis F. Moore, Prof. W. M. Scott and others are to assist, but we would have been glad to visit the Tennessee Agricultural College farm and see some of the good work that Prof. Soule and his associates are carrying on so successfully. So far as possible Tennessee farmers should attend this convention—for the good they will get directly and as a means of encouraging those who are pushing forward so intelligently and vigorously the agricultural interests of their state.

MISSOURI HISTORY.

The Missouri State Historical Society, for the support of which the 41st General Assembly appropriated \$4,500 for the next two years, held a meeting in Columbia, April 23, and effected a temporary organization, with E. W. Stephens as president, and Eldred Loeb as secretary. Walter Williams was made treasurer, and Miss Minnie Organ was elected librarian. None of the officers receive any salary except the librarian, who is paid \$60 a month. The temporary organization will continue until the regular meeting, on August 10.

This society is an outgrowth of a movement inaugurated by the Missouri Press Association and editors of papers that are sent regularly to the library are, under the constitution adopted, members of the society. We referred in our last issue to the work of this society and suggested that Missouri agricultural history should be included as a part of the work, and it doubtless will be.

IT IS GETTING INTERESTING.

That "Nothing succeeds like success" is exemplified in the manner in which the action of the Missouri General Assembly in providing for a Dairy and Live Stock Building and Chair of Dairy Husbandry at the Agricultural College is received. Not only is there a "whole host" of men ready to come to Missouri from leading dairy states, and, for a salary, help develop a dairy industry here where many have been wont to say none could ever be developed, but the press, even the city daily, is booming the business. A St. Louis paper gravely remarks: "Now that the state has provided for the equipment of a Dairy and Live Stock Building and a chair of dairy husbandry at the College of Agriculture, we shall doubtless see more interest taken in intensive and scientific farming in Missouri."

"It has been customary in some quarters to ridicule the scientific farmer, but facts have proven that exact attention to details and living up to the latest discoveries in agriculture are paying. A pound of butter made according to the best modern methods will average 23 cents in the market, against 11 cents for stuff made on the rule of thumb methods once in common use."

"Every gain in knowledge of how to raise cattle, dairy produce and crops and market them with 'gumption' is an addition of wealth to the producers and to the state."

The RURAL WORLD said recently that the action of the 41st General Assembly in providing for a chair of Dairy Husbandry marked the beginning of a new era in Missouri agriculture. Evidence is accumulating that the new era has begun with a swing that will stir things.

USING FERTILIZERS.

This subject is one that is of vital interest to farmers, and yet one which is very little apprehended, because to get the very best results, close observation and intelligent experimentation are positively essential, and these, too, by the individual farmer. As a rule a so-called rich soil is deemed to be the one essential. What is a rich soil? It is a very important question for the farmer to ask. The soil is simply the seed bed, and if it does not contain the needed food in proper proportions for a given plant and in a condition easily rendered soluble and available, no matter what the chemical analysis may be, this plant will not give the largest yield.

In increasing soil fertility so many factors enter into the problem that the farmer must be a student not only of soils and the chief elements needed for plant growth, but also of the chemical composition of the plants themselves in order that he may supply the food needed by them. This is especially true if the system advocated by the French scientist, George Ville, is true. He has classified plants for fertilization into three groups, making this classification according to the dominant ingredient needed for the plant growth. Thus nitrogenous fertilization is required for wheat, oats, rye, barley and meadow grass; phosphoric acid for Indian corn, sorghum and sugar cane, and potash for peas, beans, clover and potatoes. This does not mean that only a single element is required for a plant, but that the dominant ingredient needed should be the one to be in excess in the fertilizer compounded. This phase of the use of fertilizers is one that should have attention, not that it can be followed absolutely, but it suggests that fertilizers are not to be used hit or miss, which results as many times in a miss as in a hit and leads to condemnation of fertilizers.

Then, when to use fertilizers is another very important consideration. It is generally recommended that phosphoric acid in the form of dissolved bone, ground bone, bonemeal and acid phosphate; and potash in the form of sulphate of potash, muriate of potash and kainit be applied several weeks before the seeds are planted, while in the application of nitrogenous fertilizers more care must be taken. If that very soluble and quick acting form of nitrogen is used—nitrate of soda—it should be applied as a top-dressing to stimulate the plant to hasten its growth. But farmers are learning the value of the clovers, cow peas and the legumes to furnish the soil with the needed nitrogen. The farmer who gets from his land all that it is possible to get will make thorough study of fertilizers in their various relations to soil and plant life.

BARN PLAN SUGGESTIONS WANTED.

Editor RURAL WORLD: On April 12th we had one of the hardest hallstorms I ever witnessed. Fortunately for our immediate neighborhood the heaviest part of the hall was three or four miles west of us. There the hallstones lay on the ground to the depth of five inches or more on a level, and for a week or more there were plenty of hallstones in the drifts. Where the hall was worst the peach buds and blooms were stripped from the trees. While we were fortunate in being in the edge of the hallstorm we were unfortunately in being in the path of a young cyclone that was playing along on the edge of the storm. It struck the southeast corner of my largest barn, smashed up nearly half of the roof and threw it 100 feet or more away, playing smash with it and otherwise wrecking the barn so that it



S. F. GILLESPIE, THE WASHINGTON, D. C. CORRESPONDENT OF THE RURAL WORLD.

Our readers will be pleased, we are sure, to become a little better acquainted with the writer of "Pebbles from the Potomac," Mr. S. F. Gillespie of Washington, D. C., so we present his portrait.

will have to be pulled down. In fact, I have it nearly taken to pieces and find it as hard work as I ever tried. I want to build me a new barn, using what lumber I can save from the old one, and would like some suggestions as to the plan. I know what I want, but whether the plan is a good one for stable stock and feed is what I want to know. My plan is for a building 33 feet wide by 40 feet long and 14 feet high, or to the square, the gables facing north and south. A walk or aisle in the center, with mangers or feed boxes 2 1/2 feet wide, as long as the stalls are wide and two feet deep, on either side. On the west end are to be stalls 4x12 feet, and one box stall for horses; on the east stalls 5x12 feet for cows; at the north end on the west side will be a room 10x12 feet for harness, ground feed, etc. On the east side a corn crib 6x12 feet and an oat bin 4x12 feet, all eight feet high. The mow will hold about 30 tons of hay.

The above plan is as handy as a pocket in a shirt. But it is best to have the cows, horses, hay and grain in the same building?

Any suggestions for the improvement of the foregoing plan, or different plans, will be gladly accepted by yours truly, Vernon Co., Mo. C. A. BIRD.

Farmers' Bulletin No. 126, "Practical Suggestions for Farm Buildings," by George C. Hill, and published by the U. S. Department of Agriculture for free distribution, will, we think, be very helpful to Mr. Bird and others who are contemplating the erection of farm buildings. We will be glad, too, to have our readers offer suggestions to Mr. Bird.

While it is handy to have hay storage above the stock, we do not like it so on account of ventilation and injury of the forage by emanations from the stock.

PEBBLES FROM THE POTOMAC.

Editor RURAL WORLD: A press report from Lexington, Va., indicates that farm lands in that section are in demand, and bring good prices, too. The report says that the farm of Alfred A. McCormick, containing 132 acres, brought \$7,500; the Lee farm, containing 240 acres, went for \$6,000, and the Highland farm, containing 275 acres—a stock farm—brought \$5,500. Pretty good prices for the Old Dominion State.

ON TO OKLAHOMA.—Owing to the contemplated opening up to settlement of new lands in Oklahoma Territory, under the act of March 3 last, providing for dispositions of lands ceded by the Wichita, Kiowa, Comanche and Apache Indians, the correspondence of the Commissioner of the General Land Office has reached enormous proportions. It is anticipated that as much as the lands offered for settlement include only about 12,000 quarter sections, or an equal number of homes, the rivalry for a homestead in this race will be tremendous. The proclamation opening up this section can not be issued until after August 6 next.

EGGS.—An exchange says that "H. M. Slayton, of Manchester, N. H., has just placed with dealers in Kansas and Oklahoma an order for enough eggs to enable him to eat two eggs for breakfast every morning for 40,000 years. These eggs will cost Mr. Slayton about \$300,000. They will fill 200 freight cars. Their production will keep 600,000 hens cackling for sixty days. Of course, Mr. Slayton does not want these eggs for his personal consumption. It is not known that he eats eggs at all, and it is certain he is not going to live 40,000 years to eat all the eggs he has ordered. What he is going to do is to put

these 23,800,000 eggs in cold storage at Manchester, N. H., and Quincy, Mass., and sell them when the market will afford him a profit."

BEEES.—The attention of the Commissioners of the District has been called to the matter of keeping bees within the city limits. Some complaint has been made to the effect that bees within the city limits are a nuisance and market men declare that bees are annoying to their customers. Notwithstanding these protests, the bees have a true friend in the person of Prof. Cleveland Abbe, who has written a communication to the Commissioners asking that the keeping of bees, especially those of the Italian persuasion, be made legal and allowable within the city limits, with such regulations as may be necessary for the protection of those who desire to prosecute this method of making a livelihood. The professor says there are hundreds of hives of bees in the yards in this city, and believes it would subserve the best interests of the community to make a general regulation rather than to leave it to any one's neighbors to make formal complaints. He is inclined to the opinion that the harm done by the bees is infinitesimal compared with their usefulness; that every poor man ought to have the privilege of keeping a bee hive. The bees, he claims, ordinarily attend to their business without harming anybody. It requires a great deal of irritation from outside parties to induce them to sting, and they are no more hurtful than horses, dogs or cats. The professor has several hives of bees and is constantly increasing his supply.

CROP CONDITIONS.—The Department of Agriculture has about completed plans whereby an exchange of crop reports of foreign countries will be supplied the public each month. Secretary Wilson is sanguine that the contemplated innovation will prove successful and the results obtained will prove beneficial to the American farmer, as an authentic report of the grain condition from all parts of the world will enable the American agriculturist to intelligently decide upon what crops can be advantageously cultivated. The bulletin will be comprehensive, giving essential features of the condition of crops from seedtime to harvest. In this connection, it may be stated that in the growing of wheat in the old world, Russia stands first, France second, Argentina and Chile are the chief wheat-producing countries of South America. The Argentine crop is especially important to the United States, as it is harvested in January and is thrown on the market on what is known as the dull season, consequently affecting prices in the United States to some extent. The harvest of wheat goes on in every month of the year in some portion of the globe. In January the fields are ready for the harvester in Australia, New Zealand and South America. In February the hump of the reaper is heard in Egypt and parts of India; in April it is harvest time in parts of India, and Mexico and Cuba; in May China and Japan farmers are gathering their grain; in June and July the field ready in parts of the United States and Europe, which continues through August, and during September, October, November and December there are small harvests in various parts of the globe.

S. F. GILLESPIE, Washington, D. C., April 23.

Locked up in a seed is the embryo of the plant, flower, tree, fruit. It is the task of the farmer or gardener to break the lock, supply the proper environment to bring life to the embryo and develop, to the perfect mature stage.

ALL ALONG THE LINE.

Hired Hands.

Editor RURAL WORLD: Last winter I was making a night trip between two institute points and a young man on the train found out who I was. He came up, introduced himself as a graduate of a state college, and told me that he was managing a large farm in Blank County. He asked my opinion on a matter connected with farm work, and then proceeded to tell me what he knew. Now, I am a pretty persistent talker, but I did not get in a dozen words while we traveled 65 miles. I did not get a single practical idea from the young man and I am not sure that he had any such ideas. I have since learned that his employer paid him six months' wages and let him go. I thought of him the moment I read L. E. Shattuck's letter in the April 17 issue of the RURAL WORLD.

It is by no means certain that a college training will make better farmers of our young men; certainly it should do so, but most hired men want to earn their wages in the easiest way possible. We all know men that are trying to farm who would make better preachers than farmers, and we all know preachers who would succeed better as sawmill men. I never had but one hand who would sit down at night and read a farm paper, and he aimed to apply the knowledge he gained. I mentioned him in the RURAL WORLD some time ago. He was a good hand, but when he went to farm for himself was a perfect failure. Four young men from my vicinity have attended our State University, and none of them returned to the farm when his term was completed.

MOTH TRAPS.—As a tobacco grower I tried such traps ten years ago as some one reported in a tobacco journal that they were a success. I had three traps set, one with light, and two crooks with sweetened water and no light. I caught many corn worms, cut worms and bud worm moths, but only caught three tobacco worms. I came to the conclusion that such traps were valuable for catching some moths, but I found fully as many in the traps where no light was set as in those having a large campaign torch for a bait. A great deal might be done to destroy the June bug, which is the parent of the white grub, by spraying solitary trees along pasture fences with arsenites. I find that these June bugs have a great fondness for leaves of the hickory, and a few minutes spent just at sundown in spraying a tree or two would kill hundreds of the bugs.

HONEST ADVICE.—I like to read such letters as that from C. N. Crotsenburg, page 121. Such men as Mr. C. make good neighbors and good citizens. How easily he could have boomed his section and painted rose-colored pictures of its advantages, but see where he modestly says: "For the small stock raiser, dairyman or professional fruit grower it is almost ideal." Such language will not induce the owner of a good farm in the older farm regions to sell out, pull up stakes and start for Howell County, Mo., but it will set the man of small means to thinking of the several advantages Mr. C. speaks of when he tells about his country. There is a great future for this great middle south, and if I were to make a change I would certainly see the section that friend Crotsenburg writes of.

GOOD ROADS.—Mr. Editor says that the public should help the farmers to build and keep up the roads, and Mr. Editor is, as usual, right. Here we work two days per year. Each man between 21 and 55 years has to perform this work: pay a fine of \$3. In the country districts this work is usually all done honestly and placed upon unimproved or dirt roads; in towns the law is disregarded. In addition to this we pay a sum not exceeding 10 per cent of our total tax as road tax and have the privilege of working this out to turnpike repair and here wholesale robbery is practiced. The county commissioners appoint superintendents for each township, and such appointments are made without regard to fitness of the party seeking the job, except that he be a good party worker and in touch with the county board. These fellows "absorb" a large sum of the people's money and waste about all the rest of it.

SCHOOLS AND TEACHERS.—Our township board, at its last meeting, decided to pay our teachers \$40 per month for the ensuing school year; this is an increase of \$5 per month. The increase causes some kicking, but it is just, as no teacher can pay his board for an entire year, buy books and attend the institutes and lay up much money on even \$40 per month for seven months. Talking with a man who has taught 14 years a few days ago, I asked him if he had saved any money. He said that he had \$300 in bank, no more. This man spent nearly two years in a training school and several summer terms at normal schools, yet he has laid up less money than half a dozen farm hands I know of who get \$15 to \$20 per year. There ought to be some system of pensioning our old teachers from the state funds; such a system is in operation in Cincinnati, I think. A man or woman who spends 25 to 40 years in the service of our people and who serves faithfully should not be allowed to become an object of charity, yet I have known such cases. JERSEYS FOR BEEF.—As we do not make butter for sale in any but a small

way, we do not always read the Dairy page very closely, but "Buff Jersey" in the RURAL WORLD April 17 came in for a favorable notice. We keep high-grade Jersey cows and have no trouble in selling our steers for very nearly the same price that Shorthorn steers bring at the same age. One must not keep Jersey steers until they are "long two-year-olds," but must get rid of them at 12 to 16 months. We sell to the butcher in country towns and get the same price per cwt. as is paid for cattle of the regular beef breeds. From an old account book I find sales—two at 16 months old, \$40; one at 18 months, \$25; one at 15 months, \$18; two at 17 months, \$43; one heifer, 22 months, \$26; one heifer, 22 months, \$25; one heifer, 14 months, \$15.50. These sales were made from 1887 to 1896. Since the latter date we have generally sold them as veals and at prices from \$6 to \$8 at four weeks of age, and we think our prices pay us very well.

POULTRY ON THE FARM.—Yesterday a friend spent the day with us and we discussed poultry. He left off the "dis" as he winters his fowls in a walnut tree. Now, of all places on earth to winter fowls, a walnut tree is worst; any other kind of a tree is better than a walnut. His wife has not sold a dollar's worth of eggs since November, while my wife has sold on an average \$5 worth per month. He is going into sheep raising; says he will keep 10 or 12 brood ewes and put every chicken off the farm. Now, as he will only keep common sheep, I cannot possibly figure out how he can make as much off his sheep as "the cook" will from her chickens, as we have passed the hundred-dollar mark twice. Last year we did not do quite so well, but my sister, a wealthy little woman of 97 pounds, sold \$118 worth of chickens and eggs. We do not count the cost of feed, as we use all the poultry and eggs we want for the table, and these sold at market price would pay double price for all feed used.

ANIMALS EATING TOBACCO.—Judge Miller notes the loss of a fine goat from this cause. Almost any animal will eat tobacco, and it will kill cattle, sheep or a pig if eaten in sufficient quantity. We have a calf shut up in a tobacco barn, and that calf eats every scrap of leaf that blows or falls into its pen. It is a fine calf and grows very fast. I have heard my father say that a deer would eat a large amount of tobacco with no ill effects, as he had proven with some pet deer he once owned. I have known more than one good horseman to crumble a leaf of tobacco among the oats in the feed box, claiming that it was a valuable vermifuge and I know that horses kept in tobacco barns are not so liable to disease as other horses. Cattle are more susceptible to poison from tobacco than other stock and I have known death to result from them eating no more than four or five leaves. C. D. LYON, Brown Co., O.

THE SPRING IN NORTHEAST KANSAS.

Editor RURAL WORLD: The season so far as farm work is concerned, has been very backward, nothing being done until the middle of April toward getting in the crops. Now, May 1, corn planting is in full blast and another week will see many of the farmers done. The oats were not gotten in very early, but seem to be coming finely. Ground seems to have baked after the excessive wet weather at the beginning of spring and this caused it to turn hard with lifting and plowing. The alfalfa fields are doing fine. Pastures will soon be able to support stock. Peaches are blossoming profusely and a good crop is promised. Other fruit also promises well. Stock of all kinds passed through the winter in good condition, although there was a sort of epidemic passing around among horses that in some cases ended fatally. Considerable of the so-called "corn stalk disease" prevailed among cattle in stalk fields. Also there was an occasional case of black leg among young stock. Hogs were generally healthy. There were some fears among fruit growers that late heavy frosts had damaged the prospects, but these fears seem groundless unless in certain exposed localities.

There is quite a demand for farm horses just now, good animals finding ready sale at good figures. Fat cattle and hogs are selling at good prices in the market, and farmers are pushing all stock on hand to take advantage of the prices. All old corn to be marketed has been rushing into the elevators for the past ten days. There is a shortage in roughness on account of the late start of the pastures, which will take all the hay and straw pretty well out of the country. Cattle still on feed, although where pastures are nearly some farmers are feeding roughness in pastures, leaving the animals pick a partial living.

There will be considerable building going on among the farmers this season after the corn is laid by. Barns and houses will be put up and other improvements made. There has been considerable movement in real estate the past six months. The prices of farms are steadily advancing. Few speculators are buying, but mostly substantial farmers, who will make homes of the farms. Everything points to a profitable and prosperous season. The farmers seem to be well fixed financially. There is plenty of work at good wages for all who desire it. Farm produce is ready sale at good prices, and promises to remain so. The farmer of this section has little cause for feeling despondent. J. L. IRWIN, Nemaha Co., Kansas.

SPRING DAYS AT SEVEN PINES.

Editor RURAL WORLD: Spring days on the Flood Plain are real pretty and enjoyable. Great fields of wheat embellish the farms, and the grass adds its own beautiful carpet of green. The peach trees are bedecked in their delicate tints of modest pink, and the apple and the plum and the cherry are out in dress parade uniforms of imitable colors.

THE BIRDS.—Most all classes of migratory birds have arrived and are in sweet voice. The true southern mockingbirds are here, and this early coming so pronounced a variety of sub-tropical birds is somewhat phenomenal. Graceful in flight, beautiful in plumage, modest in manners, and sweet in song are characteristics belonging peculiarly to the true southern mockingbird. In the dense groves during the hour of twilight and a little later, one may now hear the notes of the song sparrow. This bird is retired in disposition, and its delights in thickly shaded and vine-clad trees which will give natural seclusion. Coming along in regular succession, we will soon notice the arrival of the hummingbird and the cuckoo. From its late appearing one would incline to believe the hummingbird to be of a delicate and almost strictly tropical nature, yet it is peculiarly hardy and prolongs its sojourn with us until early October. This tiny creature is strictly migratory, and from its delicacy of size the wonder is how it can survive the severity of a temperature so inhospitable as a mountainous height of ten thousand feet. Yet this is the achievement of the bold little navigator of the air, for United States Geological Explorer Russell tells of seeing hummingbirds when exploring Mount Rainier nearly two miles above sea level, far above timber line and all forms of vegetation. Among our native birds we have the Gold finch; a regular little type of the Fred Funston style. This bird is about the size of the wren, and the male is arrayed in bright gold, relieved with dark. It remains in this latitude all the year, and defies the cold and gloom of the most severe winter.

THE BEES.—At Seven Pines the village of bee colonies came through the winter in fairly good order. The month of March and some of April were times of trial for the bees, for the almost constant stormy days were too strong for the flight of Aphis mellifica. During the closing days of April the temperature moved up to summer heat, and this invited the busy bee to come out in search of pollen for the larvae. Sometimes I like to linger near the hives and notice the going and coming of the bees. What an endless line, and how they hurry away and hasten into the home when returning. They enter the doorway running, and some of them come in all covered with golden powder. Some miners are extra lucky, it is remembered. The bee prospect at this date averages good, and I am expecting some strenuous adventures in taking down big swarms from the shrubs and trees about the home. One of the choice places for a swarm to cluster is on a gooseberry tree. This kind of a claim on the Cherokee strip just suits my fancy.

THE AGRICULTURAL YEAR BOOK for 1900 is promised to be presented to its patrons along during May, and I am anxiously awaiting the coming of this prized publication. It is, indeed, a valuable work, and farmers should take more interest in reading the many subjects which are the result of experiments and investigations of the highest authority. The Year Book, in general make-up, is now and has been for some years, a classical volume, and its presence and endorsement should characterize every farm home. Good books? My! but how abundant and excellent they are. Just now, in this brief review of books, I wish to mention the Missouri Geological Survey dated 1900. This is a beautifully printed book, and of splendid contents. I haven't space in this letter to tell of its many things of interest all related in refined words, but will do so in the near future. Clark Co., Mo. JASPER BLINES.

A FRANK ACKNOWLEDGEMENT.

Editor RURAL WORLD: In your issue of May 1 you call attention to a statement of mine in the April Bulletin of the Board of Agriculture, which, perhaps, is capable of conveying an idea not intended by me. You correctly interpret the meaning when you say that I probably meant "practically nothing had been done by the State to develop the dairy interests." I am not only ready to admit, but am eager to publish to the world that a great deal of good work has been done by the officers and members of the State Dairywomen's Association in establishing and developing this great industry. This effort is certainly the more commendable because it has been made, not on account of selfish interest, but entirely for the public good. With a few more agencies at work to supplement what is being done by the RURAL WORLD and the State Dairywomen's Association, the annual dairy product of the State should in a few years reach the sum of not less than thirty or forty million of dollars. Respectfully, GEO. B. ELLIS, Sec'y, Mo. State Board of Agri. Columbia, Mo., May 4.

The tide of agriculture is now reported as setting back to New England, and it is claimed that abandoned farms in that section can no longer be found.

Live Stock.

HEREFORDS.
May 11 and 12—C. A. Jamison, Peoria, Ill.; S. H. Godman, Wabash, Ind.; and others, at Chicago, Ill.

ABERDEEN-ANGUS.
March 14—H. M. Gitting, Decatur, Ill.
March 20—J. Gardner, J. W. Matkinson and Son, Kansas City, Mo.
April 20—Haley Bros., Harris, Mo., and others, at Kansas City, Mo.

PUTTING OUT CALVES ON SHARES.

EDITOR RURAL WORLD: I noticed an article published in a St. Louis or Kansas City daily, but have forgotten what paper, stating that some Chicago moneyed man or men were making a proposition to the farmers of Kansas and Nebraska to the effect that they would buy for a farmer of good reputation as many heifer calves as such a farmer could manage with care and comfort, and that all they would require of the farmer was at the end of seven years on good steer two years old and one dollar in cash for each heifer calf furnished at commencement of the contract.

I wish now to know if you ever heard or read of such a party and proposition. If so, can you furnish me with name and address of said parties? I did not think much about the proposition at the time, hence lost the paper and all trace of the matter. Since then I have mentioned the matter to several farmers, and find many who want to get the address.

It appears to be a fair proposition for both parties to the contract, and would be a great benefit to many communities by enabling farmers without means but reliable, to get a start.

Morgan Co., Mo. JNO. W. MARTIN.

We do not know of anyone offering to make such arrangements with farmers, but should any of our readers know of such, they will confer a favor by reporting the information—Editor.

CLOVER BLOAT IN CATTLE.

EDITOR RURAL WORLD: The recent death of three or four cattle from eating a gorge of clover reminds me that it is well to advise as to methods of prevention and care of bloat. If cattle are fed a bunch of dry straw or fodder well sprinkled with salt water in the morning before being turned in on damp clover, they will seldom if ever have bloat.

Another good plan is to turn in until about 9 o'clock, but this fails on cold, windy days, as on such days cattle bloat much more readily than even on wet mornings.

A drench of a teaspoonful of baking soda, or what is better, two ounces of sodium hyposulphite, in a pint of warm water, often cures within a few minutes, and a pint or more of powdered charcoal in a quart of water sometimes has the same effect.

I know an old German who said that he never lost a case if he used the following: A rope of hay or straw about two inches in diameter was made and coated with tar for six or eight inches in the middle and the tarred part fastened in the animal's mouth, tying the ends back of the horns. Driving the animal about briskly until the bowels move freely is an old and sometimes successful method.

The last resort is puncture of the stomach with a long-bladed knife or trocar made for the purpose. This is attended with little pain or danger. If a knife is used the blade should be at least one inch wide and five inches long, and should be pretty stiff. I have one that I made myself from a bit of a cross cut saw, ground down to a double edged knife, with a very sharp point. The place to make the incision is on the left side of the body, at a point equally distant from the ribs, the angle of the hip bone, and the backbone or vertebral column. The cut should be a bold one, and by a single thrust of the knife. As the knife is withdrawn a tube slightly smaller than the knife blade and 10 inches long may be inserted in the cut; this allows the gas to escape faster. This tube may be made of tin, or even of a bit of elder or other pithy wood, and can be removed as soon as the bloat subsides.

It is best to keep an animal which has bloated in the stable for a day or so after treatment, as some animals are more subject to it than others and need careful watching.

It is often said that a bull bloats, but that a heifer in calf is more subject to it than animals in other condition. Be this as it may, I know of the death of from 10 to 20 animals every year, and everyone could have been saved by prompt internal treatment, or failing in this by the knife.

C. D. LYON.
Brown Co., O.

GALLOWAY BREEDERS TAKE NOTICE.

EDITOR RURAL WORLD: Volume XI. of the Herd Book will be ready for delivery about the 1st of June. The price of the book will be \$1 to non-members, and 25 cents for postage and wrapping; to members free by sending 25 cents to cover cost of postage.

The Executive Committee would like to have an expression of opinion as to the advisability of holding a combination sale of 50 or 60 head of Galloways at the coming show to be held in Kansas City, in October, 1901. If this sale is held it is to be distinctly understood that only the very best of the breed will be accepted for sale, and any animal that does not come up to the standard will not be allowed to have quarters in the sale barn, or be led in the ring and offered. We want to know also who have animals that they would like to put in the sale. Kindly answer these two questions at once. Are you in favor of the sale? If so, how many and what sexes will you enter for the sale?

Who has any steers, either a carload or a few, that can and will be fitted for the show this fall? We want to have a record-breaking show of steers, and hope that everyone who has a good steer will fit for the show. Kindly let me hear from those interested at once, as we want this information immediately.

Entries and transfers are now being received for Vol. XII. Those to be recorded should be sent in promptly. Send in your entries and transfers promptly.

FRANK B. HEARNE, Secretary.
Independence, Mo.

Make Cows Breed.

Hood Farm Breeding Powder does it. Write for circulars telling how and why. Best remedy for failure to breed, failure to clean, irregularity in coming in season.

By mail, \$1.15. Four times larger size is by railroad, express to U. S. \$2.75. C. L. HOOD & CO., Lowell, Mass.

THE RANGE CATTLE INDUSTRY.

EDITOR RURAL WORLD: The range cattle industry is still enjoying a bright prospect for future prosperity, notwithstanding the prediction made three years ago by would-be wise observers. They declared the cattle business was on a fictitious basis and the existing high prices would within a few years react to the ruin of the investors, owing to an overproduction of cattle, which would soon take place. The evidences of an overproduction are nowhere present at this time, five years after the beginning of the revival in prices for cattle. Every effort to produce cattle has been employed. Thousands of breeding herds have been started and millions of dollars have been invested in the effort to extend the production of cattle by establishing new ranches and improved blood. The increased export demand for our beef, the increased demand and ever-increasing population of our country must be figured in as demanding yearly increased supply when this view of the question is being considered.

THE WESTERN RANGE COUNTRY, where it was expected the greatest increase would be manifest, is each year complaining of a still greater shortage of marketable cattle. All over the western and southern ranges there has been an advance in prices of the stock offered for sale. In addition to this there has been a demand for stock of the Rocky Mountains for large numbers of these cattle, and this has had its influence in stimulating the stock trade over the eastern Rocky Mountain country and throughout the adjacent territory.

A **POINTER**—As an illustration of the prosperous condition of the cattle owners, it was noted last week that C. J. Hysham, a widely known ranchman, cattle raiser and dealer, bought in the Chicago market over 100 head of stock cattle, which he shipped to his Nebraska and Montana ranches. This, in the face of the good prices that a good grade of stockers and feeders have been bringing in the Chicago market means a still further evidence that cattle are scarce in the West and that high prices are not at an end.

THE USUALLY BAD WEATHER—

snow, storm and cold rains—have prevailed throughout the large district of the range country during the month of March and April, caused a very unexpected loss among weak and thin cattle. The open winter encouraged ranchmen to let the herds stay on the range without any longer than was safe for the strength of the breeding cows and yearlings. This loss is more than regained, however, by the excellent condition the wet weather and snows have put grazing and hay lands in.

VERY ENCOURAGING CONDITIONS

are now reported from the range country of Western Nebraska, where the live stock business is being carried on under improved ranch methods. The advance made in the past few years in the care of the herd is just the beginning of a system of care and attention which will make the Western Nebraska cattle ranch and herd famous throughout the cattle world within the next five years. The addition of good blood, the determination to breed nothing but the best and force the requirements into the herds of the state is one of the first steps taken that indicates rapid progress in improvement.

THE STOCK GROWERS' ASSOCIATION.

The influence that the Nebraska Stock Growers' Association is exerting over the state in the general disposition to live stock improvements is an encouraging feature in the future development of our stock growing industries. The annual meeting of this association, to be held at Alliance on the 12th and 14th of this month, should receive the attention of the stock growing interests, especially cattle and horses, from all over the state. This organization controls in the state, is alone worth thousands of dollars to the membership. Its other features of live stock improvements and protection are equally prominent and appeal to the business judgment and consideration of every citizen of Nebraska holding interests in the stock growing industry.

Omaha, Neb. G. C. PORTER.

SELECTING ANIMALS FOR BREEDING PURPOSES.

(Concluded from last week.)

But the form of an animal is not all that he should consider, although it is greatly important. The disposition of the same is not unimportant. This may be ascertained with considerable certainty by the practiced eye without asking a single question. The small restless eye and the small erect ear, too active in their movements, indicate with an almost unfailing certainty a disposition that is restless and ill at ease. Where these indications are prominent there is also generally a lack of width in the forehead.

The pedigree is all-important when rightly understood. But it is only the few who are capable of reading aright the mystery which it contains. The tendency with many is to value the pedigree by its length, which in reality is not the most important element. Excellence of pedigree is of far more consequence than length of pedigree. By excellence of pedigree I mean that the individual animals referred to possess high individual merit. The performance of the ancestry may not be easily ascertained. It involves to some extent a study of the history of the ancestors, and the source of information may not be easily accessible. History of the character involved is very often unwritten history. It lives in the memory of those who reared the animals or has been handed down to others by tradition. The records of the show ring speak of it and to some extent it may be gleaned sometimes from the agricultural papers on file, but, generally, sufficient can be gleaned in reference to the pedigree of performers from the breeder of the animal to satisfy the purchaser. It should not be forgotten that excellence of performance is of most importance in the near ancestry and that it becomes relatively less important as we go up the stream. It is not necessarily any sure guarantee of the possession of excellence in the animal purchased to be told that the ancestry of the twentieth or even the tenth generation up the stream were noted prize winners, but it is a matter of great practical significance to know that animals in the ancestry of three or four of the most recent generations were capable of winning prizes.

The process of selection should be continuous. It is always operative. The time will never come when it will not be required, for the time will never come when all the animals brought into existence will be the equal of their parents. Some will be better, but some will not be.



INTERNATIONAL STOCK FOOD FACTORY.

The International Stock Company's factory, shown above, occupies 15 floors, size 100 by 222 feet each, and also six floors, size 25 by 60 feet each.

It requires 65 people to attend to their office work alone, including 25 typewriters. In all departments of their business they employ over 200 people.

bull at the recent Aberdeen-Angus sale at Kansas City. These will be the foundation of a good Angus herd, for excellent animals were selected.

BIG LAND AND CATTLE DEAL.

Vinita, I. T., May 1.—J. V. Farwell, of Chicago, closed a \$50,000 deal to-day with E. L. Halsell, of Vinita, for grazing land and cattle in Western Texas. The sale included 150,000 acres of land in Oldham and Hartley Counties, at \$2 an acre, and 1,000 white-face Hereford cows at \$20 a head. Two hundred and fifty thousand dollars in cash was paid to bind the deal.

BOVINE TUBERCULOSIS.

The Wisconsin Agricultural Experiment Station has lately issued a bulletin No. 84, on bovine tuberculosis, of which the following is the summary:

1. The disease of bovine tuberculosis is dangerous not only to human health, but to successful dairying or stock raising, and this danger is aggravated because of the insidious nature of the malady.

2. Tuberculosis is widely distributed in various portions of our state, but it is impossible to give any definite figures because only a very small percentage of herds have been examined. In all probability the condition in Wisconsin is not materially different from other surrounding states that have been engaged in dairying for similar periods of time. The fact that probably only a small percentage of our stock is affected at this time makes it all the more desirable that measures shall be taken to prevent its further dissemination at a time when the expense involved will be moderately small in comparison with what it would cost if the disease were widespread.

3. In considering measures that are of value in restricting the disease, special emphasis should be laid on the matter of education. The rank and file of dairymen are not yet awake to the importance of this question, more especially as to the effect of the disease on their own herds.

4. The use of the tuberculin test should be widely extended, for in this method we possess a means, not infallible in every case, but so superior to all other methods of diagnosis known, that it is of the greatest aid in determining the presence or absence of the disease.

5. When dairymen in general have determined whether their herds have the disease or not, they can easily prevent its further spread. In case of herds now free from the disease future safety is insured by testing all animals introduced into the same. In case of affected herds, separation of reacting animals and thorough disinfection of quarters occupied by the herd will stop further progress.

6. A most important question is what shall be done with the reacting animals. By far the larger majority of animals that respond to the test have the disease in a latent form, or at so early a stage of development that neither their milk nor meat is of necessity dangerous for use. Still, inasmuch as they react to the test they show the presence of the disease germ in their systems, and as there is no simple way in which it is possible to detect just when the product may become dangerous, it is wise, of course, to regard the milk of such reacting animals as unsuitable for use until it is first treated in a way so as to render it safe, which can be done by pasteurizing it in closed pasteurizers at 140 degrees F. for 15 minutes.

7. The calves from reacting mothers can in almost every instance be raised in a perfectly healthy condition by removing them from the cow at birth (a day or so after) and feeding them upon boiled or pasteurized milk or that from non-reacting animals. It has been fully demonstrated that healthy herds can thus be raised from the originally diseased animals. This often furnishes the least expensive way of controlling the disease, and meets the objection of those who insist that immediate slaughter is unnecessary. Only such infected animals should be saved, for the time being, as show no well marked physical symptoms of the disease.

8. A revision of our veterinary laws. The present veterinary law of Wisconsin was framed and passed before the nature of bovine tuberculosis was understood, hence its provisions do not meet the conditions that surround this disease. As it has been carried out, all animals reacting to the test are considered to be affected with a contagious malady and have been slaughtered forthwith. This provision should be modified so that under the auspices of the state, the owner may have the option of retaining valuable animals under quarantine in order to permit him to raise from these affected animals healthy progeny. The milk from such reacting animals should be rendered safe by the application of heat.

The state should give a partial compensation for the destruction of affected animals as is done at present, but only where the infected quarters have been thoroughly and efficiently disinfected to kill disease organism present in the barn.

Furthermore, the state should require that all cattle imported for breeding or dairy purposes (cattle intended for immediate slaughter exempted) should be subjected to the tuberculin test before shipment or as soon as they are brought into the state.

STOCK NOTES.

F. L. HACKLER, Lee's Summit, Mo., has a small but good herd of Shorthorns that we will have something to say about later.

G. D. BUCKHART, Huntsville, Mo., purchased four females safe in calf and a

35. G. D. Buckhart, Jamesport, Mo.	125
36. C. H. Whitton, Kansas City, Mo.	125
37. Watson Bros., Kansas City, Mo.	125
38. G. D. Buckhart, Jamesport, Mo.	125
39. J. B. Withers, Missouri City, Mo.	125
40. W. B. Sutton, Russell, Kan.	125
41. Watson Bros., Kansas City, Mo.	125
42. J. B. Withers, Missouri City, Mo.	125
43. G. D. Buckhart, Jamesport, Mo.	125
44. J. B. Withers, Missouri City, Mo.	125
45. W. B. Sutton, Russell, Kan.	125
46. Watson Bros., Kansas City, Mo.	125
47. J. B. Withers, Missouri City, Mo.	125
48. G. D. Buckhart, Jamesport, Mo.	125
49. J. B. Withers, Missouri City, Mo.	125
50. W. B. Sutton, Russell, Kan.	125
51. Watson Bros., Kansas City, Mo.	125
52. J. B. Withers, Missouri City, Mo.	125
53. G. D. Buckhart, Jamesport, Mo.	125
54. J. B. Withers, Missouri City, Mo.	125
55. W. B. Sutton, Russell, Kan.	125
56. Watson Bros., Kansas City, Mo.	125
57. J. B. Withers, Missouri City, Mo.	125
58. G. D. Buckhart, Jamesport, Mo.	125
59. J. B. Withers, Missouri City, Mo.	125
60. W. B. Sutton, Russell, Kan.	125
61. Watson Bros., Kansas City, Mo.	125
62. J. B. Withers, Missouri City, Mo.	125
63. G. D. Buckhart, Jamesport, Mo.	125
64. J. B. Withers, Missouri City, Mo.	125
65. W. B. Sutton, Russell, Kan.	125
66. Watson Bros., Kansas City, Mo.	125
67. J. B. Withers, Missouri City, Mo.	125
68. G. D. Buckhart, Jamesport, Mo.	125
69. J. B. Withers, Missouri City, Mo.	125
70. W. B. Sutton, Russell, Kan.	125
71. Watson Bros., Kansas City, Mo.	125
72. J. B. Withers, Missouri City, Mo.	125
73. G. D. Buckhart, Jamesport, Mo.	125
74. J. B. Withers, Missouri City, Mo.	125
75. W. B. Sutton, Russell, Kan.	125
76. Watson Bros., Kansas City, Mo.	125
77. J. B. Withers, Missouri City, Mo.	125
78. G. D. Buckhart, Jamesport, Mo.	125
79. J. B. Withers, Missouri City, Mo.	125
80. W. B. Sutton, Russell, Kan.	125
81. Watson Bros., Kansas City, Mo.	125
82. J. B. Withers, Missouri City, Mo.	125
83. G. D. Buckhart, Jamesport, Mo.	125
84. J. B. Withers, Missouri City, Mo.	125
85. W. B. Sutton, Russell, Kan.	125
86. Watson Bros., Kansas City, Mo.	125
87. J. B. Withers, Missouri City, Mo.	125
88. G. D. Buckhart, Jamesport, Mo.	125
89. J. B. Withers, Missouri City, Mo.	125
90. W. B. Sutton, Russell, Kan.	125
91. Watson Bros., Kansas City, Mo.	125
92. J. B. Withers, Missouri City, Mo.	125
93. G. D. Buckhart, Jamesport, Mo.	125
94. J. B. Withers, Missouri City, Mo.	125
95. W. B. Sutton, Russell, Kan.	125
96. Watson Bros., Kansas City, Mo.	125
97. J. B. Withers, Missouri City, Mo.	125
98. G. D. Buckhart, Jamesport, Mo.	125
99. J. B. Withers, Missouri City, Mo.	125
100. W. B. Sutton, Russell, Kan.	125

ST. LOUIS NATIONAL STOCK YARDS.

Market Report furnished by Evans-Snyder & Co., St. Louis.

Receipts for week ending May 4 were 11,592 cattle, 39,357 hogs and 6,113 sheep, against 10,997 cattle, 35,550 hogs and 19,732 sheep the previous week. As compared with corresponding week year ago, cattle increased 4,300, hogs 4,000, sheep decreased 3,000. Receipts at the four principal markets for the week were 11,800 cattle, 33,500 hogs and 11,500 sheep, against 10,800 cattle, 31,800 hogs and 14,100 sheep the previous week, and 10,400 cattle, 29,700 hogs and 10,800 sheep the corresponding week year ago.

Receipts in the native division were light and included very few good cattle. Best sold at \$5.70 and averaged 1,250 lbs. Bulk of the 1,200 to 1,400 lbs. cattle sold \$5.00 to \$5.50. Beef steers closed 10 to 15c lower than last week, while beef butchers and all classes of cows figure about the same decline from the high period of two weeks ago. The fair and plain calves are 25 to 40c lower. The strictly choice stock heifers and cowboys were a shade lower, but in good demand, while medium ones suffered a decline of 10 to 15c and were very slow sale at the decline. Veal calves topped the market at \$6.00. Fat bulls were steady to strong, but thin stock bulls declined 10 to 20c. Milk cows were in active demand at strong prices. Quotations based on the present condition of the market are as follows: Best native beef steers, strictly fancy cattle, 1,200 to 1,500 pounds average, \$5.70 to \$5.85; choice export steers, 1,200 to 1,500 pounds average, \$5.50 to \$5.65; good shipping and export steers, 1,200 to 1,500 pounds, \$5.20 to \$5.45; fat to medium shipping steers, 1,200 to 1,450 pounds, \$4.85 to \$5.15; the bulk of the native beef steers averaging 1,200 pounds and upwards, medium to good quality, at \$5.15 to \$5.45 and the top was \$5.70 for 1,250 pound offerings. Steers, 1,200 to 1,250 pounds average, full range, rough to best, \$4.50 to \$5.70, bulk of sales at \$4.85 to \$5.30; steers, 1,000 to 1,150 pounds average, full range, \$4.20 to \$5.20, bulk of sales at \$4.50 to \$5.00; steers weighing less than 1,000 pounds full range \$3.75 to \$5.00, bulk at \$4.25 to \$4.70. Feeding steers, fair to choice, 800 pounds and upwards, \$3.50 to \$4.50, the bulk at \$4.25 to \$4.70, and they were good quality; common to choice stockers, \$3.00 to \$4.75, bulk at \$3.75 to \$4.30, and the quality was plain to medium; stock heifers full range \$2.50 to \$4.00 and the bulk at \$3.00 to \$3.50. Fancy native heifers sold at \$4.75 to \$5.00, and there were very few on the market; choice native heifers sold at \$4.50 to \$4.70; good native cows and heifers sold at \$3.50 to \$4.00; medium cows at \$3.10 to \$3.40; fair cows \$2.60 to \$3.00; inferior, light and old cows \$1.50 to \$2.00; the bulk of the Southwest cows sold at \$2.50 to \$3.40, and the bulk of all the cows sold at \$2.75 to \$3.50. Canning cows sold at \$1.25 to \$2.25. Veal calves, full range, \$5.00 to \$6.00 per 100 pounds. Heretics and cullings sold at \$2.75 to \$4.00 per 100 pounds, with the bulk at \$3.00 to \$3.75. Bulls, full range, \$2.70 to \$4.10, bulk of sales \$3.25 to \$4.00. Stocker bulls sold at \$2.50 to \$4.00, the bulk at \$2.55 to \$3.50. During the week the milkers sold at a full range of \$5.00 to \$5.50 per cow and calf, the bulk of sales being at \$3.00 to \$4.00.

Receipts in the Southern division amounted to 232 cars, against 250 cars last week, 167 cars week before, and 107 cars corresponding week year ago. The run this week was the heaviest since the early part of March. The steer market averaged about 10 to 15c lower than week ago, with common light weight kinds a shade worse. Cow and heifer butcher cattle, and remained about firm. Bulls also were in light supply and ruled steady.

During the week Texas and Indian Territory steers 700 to 1,213 pounds average sold at \$3.35 to \$5.25 with the bulk at \$4.15 to \$4.60; cows and heifers at \$2.75 to \$4.75. The bulk at \$3.00 to \$3.50; light pigs \$4.00 to \$4.25, bulk at \$3.00 to \$3.50 and \$3.85 and calves 175 to 250 pounds average at \$3.50 to \$3.80 per head.

HOGS—With heavy receipts for the first three days of the week, and unfavorable advices from other points, buyers were enabled to force a decline amounting to 20 to 25c. Conditions were more favorable for sellers, and an advance of 50c was secured Thursday. With moderate run points, the market ruled strong to 50c higher. Conditions were again unfavorable for sellers Saturday, and a decline

Gentry Bros., Sedalia, Mo.

CEDAR VALE STOCK FARM.

Grand Duke of Hazelhurst 18666, assisted by Waterloo Duke of Cedar Vale 18665, heads our herd of pure Scotch and Bates topped, pure Scotch and Scotch topped cows of the most fashionable families. Stock for sale at all times at reasonable prices. Parties met at train. Farm two miles out. TELEPHONE NO. 90.

SHORTHORN BULLS FOR SALE!

Baron Thorndale 18660; Dark Rose of April 26, 1898 at \$90, or will trade him for better. Also 6-year bulls by Baron Thorndale and out of dams of Waterbury and Secret, these steers have been in the herd since 1895, and are great milkers. Call on or address L. G. JONES, Towanda, Ill.

SHORTHORNS, BERKSHIRES and JACKS

Shorthorn Scotch or Scotch Top and Bates mostly. Berkshires best blood in America and England. Stock of all ages and both sexes for sale. Call on or address, H. H. GENTRY, SEDALIA, MO.

ST. LOUIS NATIONAL STOCK YARDS, THE LIVE STOCK MARKET OF ST. LOUIS.

Located at East St. Louis, directly opposite the city of St. Louis. Shippers should see that their stock is billed directly to the National Stock Yards.

C. G. KNOX, Vice-Pres. C. T. JONES, General Mgr. L. W. KRAKE, Asst. Gen'l Mgr.

SCOTT & MARCH, Breeders of Registered Herefords.

Young Stock for sale. BELTON, MO.

"Pasteur Vaccine" SAVES CATTLE FROM BLACK LEG

Nearly 2,000,000 successfully treated in U. S. and Canada during the last 5 years. Cheap, safe and easy to use. Pamphlet with full particulars, official endorsements and testimonials sent FREE on application.

Pasteur Vaccine Co., Chicago.

Branch Office, 621 Whitney Building, Kansas City, Mo.

HEREFORDS GUDGELL & SIMPSON, 600 HEAD IN HERD. Independence, Mo.

Shorthorn Cattle—Scotch, Scotch Topped, Bates and Bates Topped. As good blood as the breed contains. Imp. Nonpareil Victor 18373, Imp. Blackwater 18384, Grand Veal for 18712 and Windsor Duke 1113, 11202 in service. Young stock for sale. Come and see or address GUDGELL & SIMPSON, Nettleton, Mo.

CRYSTAL SPRINGS SHORTHORNS

19 Yearling Bulls and 15 Yearling Heifers, all reds, for sale, out of cows of the Kirkpatrick, Accom, Rose of Sharon, Princess, Bransford and Goodness families, and other famous blood. Also 100 head of Scotch and Scotch topped, pure Scotch and Scotch topped cows of the most fashionable families. Stock for sale at all times at reasonable prices. Parties met at train. Farm two miles out. TELEPHONE NO. 90.

BLACKWATER SHORTHORNS! F. M. MARSHAL, Prop.

Headed by the Cruikshank Bull, Orange Horn 182, 625 by Goddy. Females are of pure Scotch and pure Bates, with individual merit the standard. Young stock of both sex for sale.

HEREFORD CATTLE! N. E. MOSHER & SON, Salisbury, Mo.

30 bulls and 30 heifers for sale, all registered, choice bred. Call on or address.

100 Head Shorthorns

In herd; young stock of both sexes for sale. The Cruikshank Bull Duke of Harrison 18207 at head of herd. W. H. H. Stephens, Huntsville, Mo.

I will sell the Hereford Bull, Sir Harold 2769, grandson of Corcoran and Sister 26. Also 100 head of pure Scotch and Scotch topped, pure Scotch and Scotch topped cows of the most fashionable families. Stock for sale at all times at reasonable prices. Parties met at train. Farm two miles out. TELEPHONE NO. 90.

Ed. C. Weeks, Eldon, Mo.

AUCTIONEERS.

JAS

Horseman.



The State Board of Agriculture of Indiana has decided to appropriate \$15,000 for the use of the speed department of the State Fair this year. Of this amount \$7,000 will be for the stake races and the remainder for purse races.

Chilean cavalry horses have been put through a remarkable test of endurance. Twenty-one officers mounted on their ordinary chargers rode 260 miles in three days, covering 51 miles the first day, 51 the second, and 58 the third. The route was over rough mountain roads, in some places 3,000 feet above the sea level. All the horses were bred in Chile.

Mr. McCully announced yesterday, says the "Herald" of April 24, that the New York Trotting Association would offer a purse of \$3,000 for a big pacing race among the cracks of the free-for-all class. The race is expected to bring together such horses as Joe Patchen, 2:30; Prince Albert, 2:30; Anaconda, 2:30; Coney, 2:30; Connor, 2:30; Searchlight, 2:30; Frank Bonagh, 2:30; Hal B., 2:30; Indiana, 2:30; Giles Noyes, 2:30; and Johnny Agans, 2:30. The owners of several of these horses have already agreed to enter them.

The road, carriage and coach horses are the highest class of unregistered horses on the market. They are distinctly driving horses, though not racers, and are used for private work as distinct from public service. The varied uses to which these horses are put admit a wide range in height and weight. Horses may vary in height from 15 hands to 16 hands 3 inches, and in weight from 1,000 to 2,500 pounds, and still rank in this class. First-class animals of this class sell at from \$150 to \$300 and upwards, fine specimens selling readily at \$400 or \$500.

C. G. Comstock, of Albany, Mo., who is quite an extensive breeder of Hereford cattle, is also branching out in the breeding of light harness horses at his well appointed farm, located near Denver, Mo. R. P. Eslinger is in charge of the breeding and training department. The premier stallion is Abihu, a handsome 1,300-pound son of Pretender 1453, dam by Onward, 2:25. About a dozen well-selected standard mares are now at the place, six of them by Herschel 1523, the noted Missouri sire, and son of Belmont. A number of promising young things are being trained.

Speaking of the growing scarcity and increased value of high-class carriage horses, a well-known New York dealer recently said: "We were lucky in getting together nearly 200 coach horses before the busy season opened. Without a big reserve stock to draw on we could never supply the demand this spring for this type as fast as we are selling them. We are still buying, but horses of the right sort are now very scarce, and we have to pay like sixty for them. I estimate that we saved fully \$15,000 by purchasing heavily last fall."

A wonderful ride was accomplished by Mr. Cowper Thornhill of the Bell Inn, at Stilton, England, on April 23, 1745. An inscription on a print of the time tells us that he started from Stilton at 4 o'clock in the morning, rode to London, 71 miles, and reached the Queen's Arms, opposite Shore-ditch Church, in 3 hours and 55 minutes, returned to Stilton in 4 hours and 12 minutes, and came back to London in 4 hours and 13 minutes. He thus won easily his bet that he would perform this feat in fifteen hours. The race excited great interest, and it is said that the road for miles was lined with people waiting to see Thornhill pass.

A disease which several veterinarians have diagnosed as diphtheria is prevalent among the horses of farmers living in Genesee, N. Y., and vicinity. The disease is in a severe form, and none of the horses which have been attacked have recovered. The first horse attacked belonged to John Hanby, who lives near the shore of Conesus Lake. The horse and three others which belonged to Hanby have died. John D. Demorest of Genesee has lost two horses, matched road animals, for which he had refused \$500. Eight other horses worth about \$1,000 belonging to various farmers, have also died. Remarks—If anti-toxine is a remedy in the human being, why should it not be for the horse?

The first matinee of the Gentlemen's Driving Club of St. Louis was held Saturday. The fields were small, owing to the fact that few horses are in condition to race. The following were the results:

Redmont, b. g. (T. W. McManus).....1
Bonner Miller, b. c. (Bonner Miller).....1
Half mile—1:39 1/2.
Gentlemen's road race, to wagon:
Lady Helen, blk. m. (John P. Martin).....1
Angie, ch. m. (James E. Kenney).....2
The Blacksmith, b. g. (Thomas Carlin).....3
Gold Coin, ch. g. (J. D. Straus).....4
Time—1:17, 1:17.
3:00 trot:
Lucky Boy, b. g. (Clem Welch).....1
Electer, b. c. (Colman Stock Farm).....2
Flora Cicerone, blk. m. (Bonner Miller).....3
Time—1:24 1/2, 1:24.

With Europe as a market for our fast trotters, it now remains for some enterprising horseman to work up a foreign market for pacers, and it is said that this would not be difficult to do in the Argentine Republic, says the "Horse

World." The average citizen of Argentina is an enthusiastic lover of racing, the runner is the popular race horse there, although some attention has been paid to the harness racers. No difference is made between the trotters and pacers, and they start together in the same race. The preference, however, is said to be for the pacer, and recently a wealthy resident of that country placed an order in this country for two pacing stallions having speed enough to pace at least in 2:35. To those who are breeding pacers, it would seem as though the Argentina market for horses of that gait would be worth cultivating.

The attention of horsemen is called to the speed programs of the fairs advertised in this issue. Beginning at Quincy, July 23, there is a continuous circuit of eight weeks racing, taking in from week to week such desirable towns as Columbia, Holden, Harrisonville, Rich Hill, Nevada, Higginsville and Sedalia, where the State Fair will be held, and then there is hope that towns will fall in line like Centerville, Moberly, Huntsville and Chillicothe. If they will arrange to have their fairs as a continuation of the circuit it will be most desirable. These towns all hold successful fairs, and we think it would be better for them to join in the circuit, than come in competition with the fairs in the S. W. circuit. The stock of fast trotters and pacers is short, and if divided will make poor entry lists. All fairs need large entry lists to hold successful meetings.

L. E. CLEMENT'S HORSE GOSSIP.

Editor RURAL WORLD: One of the first events in the light harness world of Missouri will be a June meeting at Rich Hill. John D. Moore, the local and circuit secretary, has been working all winter to get the two great five-year-old pacers, Blonda Redwood, 2:11, and Riley B., 2:04, together. Both are five years of age, both are owned by citizens of Rich Hill, and both are known to be very fast. The mare wears the straps, has never known what it is to have a careful preparation, and has already probably been driven by any harness horse in the country this season. On the other hand, the horse is willful, and does not know what it means to be forced into early and quick preparation. In all his races he has been driven by his present driver, has raced in more races than any three-year-old ever was, and tied in his record with Sidmont and Red Seal, all having three-year-old marks of 2:04. He is to-day in better condition than ever before in his life. He wears no extra rigging and has not been driven up to his speed at all since his jogging began. The Rich Hill Association has hung up \$500 to be competed for by the two horses, and the winner is to take the whole. No event in all the country will attract the same attention in Bates county that will this.

Mr. Cotton is an old citizen that has made a fortune there. While educating his daughter at Clinton he bought Redmont C., the grandson of Blonda, and drove him at Carthage, Mo., in 2:30, the first Missouri colt to pace in that time. Eighteen years ago the writer brought to Rich Hill with Milton Ervin, father of W. F. Ervin, who drives Riley B., the chestnut stallion Goodwood 223, by Woodford Mambrino, dam Jessie, by Edwin Forrest. Ed Crabb had a premium saddle mare that he bred to him and got the dam of Redwood Redmont, 2:35, sire of Blonda Redwood, 2:11. It is plain to be seen that this is a Rich Hill matter, that all the Bates county people are interested and every one will be for or "forlorn" the other side.

"Little Helen," says Observer in the "Trotter and Pacer," "is the biggest mare for her inches one could find. She is beautiful and fearless of all objects. She must be O. K., for T. W. Lawson entered her in the M. and M. expecting his agent to purchase her. Little Monocle entered her in the Buffalo slow classes. Mr. Flanagan, her owner, owns one of the best green mares in the country. Good judges who saw her trot pronounce her a 2:08 or 2:10 mare. Four thousand six hundred and twenty-five dollars for a little insignificant, inbred, knee-banging Blue Bull. Mr. Flanagan has the foundation for a claim against Mr. M. H. Redford for an amount equal to that paid C. W. Williams for the same horse, \$10,000. That would have been a small amount for a daughter of Don Felix, out of a daughter of the fastest son of George Wilkes to have won; but sired by a pacer that was out of a daughter of Kimo, son of the pacer Blue Bull, her dam by Jim Wilson, son of Blue Bull, out of a mare by Enslay's Blue Bull, another son of Blue Bull 75—such fillies ought to be bought for \$40, put in hoppers and pounded down the back; then she might go to the three-quarter mile in 30 seconds and sit down; nobody be surprised; but to start in the M. and M. for a full mile, trotting against the best in the land, it is out of reason, and Mr. Flanagan should be enjoined from making such a spectacle as such an attempt would certainly bring about. Observer, of course, when he saw her trot, thought she was by Don Felix, the high-born son of the greatest sire of trotters the world ever saw, dam by Bartholomew wheels, the admirable high-bred Electioner cross, but not a little, as she hopped, paced-bred mare, from the interior of Indiana. Observer's opinion may be good on ordinary questions, but if he still held to his opinion of this mare after he knows she is by Apple Jack, the pacer, out of a mare by Kimo, dam by Jim Wilson, second dam by Enslay's Blue Bull, third dam untraced, he would be tried for lunacy and sent to some secluded asylum for the insane, or even kept continually to study the defect of his memory or comprehension inherited as shown by Gratton from his ancestors generations back.

Mr. N. Swopes, who shipped Walnut B., 2:13 1/2, to the Blue Ribbon sale, sold Windsor Boy to Mr. Hunt, who takes him to Southern Kansas, where he is likely to be heard from. Mr. Swopes bought at the sale the trotting mare Try Me, 2:24 1/2, by Dan Mace, son of Caledonia Chief 332, son of Royal George 38, by Royal George 38, son of Royal George 38, by Black Warrior, son of Tripod. This is the horse about which there were so many fairy stories told. "That he swam in mid-ocean, etc., etc." There seems now to be little doubt that he went from the states to Canada and had more or less of the blood of the Narragansett pacer. He has been called the "Messenger of Canada." The four generations of Royal Georges down to Caledonia Chief sired five trotters, and Caledonia Chief sired five standard horses that he trotted in 2:29. The dam of Try Me was Cleo, by Oxford Boy 235, sire of May Be, 2:15 1/2, second dam Indian Pet, 2:23, by Marshall Old, son of Rile's Mambrino Pilot, out of Old Lady Waltemier.

A Lame Horse

is neither valuable for use or sale. It is better not to have a lame horse.

Tuttle's Elixir cures permanently all forms of lameness, curbs, splints, sprains, thrush, etc. Equally good for internal use for colic, founder, pneumonia, distemper, etc. Guaranteed to cure.

Used and Endorsed by Adams Express Company. **Tuttle's Family Elixir** cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," FREE. Dr. S. A. TUTTLE, 25 Beverly St., Boston, Mass. Beware of cheap imitations—see genuine label and trade-mark. Avoid all others; they offer only temporary relief if any.

dam of Strathmore. The second dam of Caledonia Chief was an untraced pacer. This makes a strong pedigree for the minor families, and as Try Me will be bred to Walnut Boy, 2:13 1/2, we can expect to see speed from her of a high order at one gait or the other.

Mr. C. E. Mosher, who was the principal worker in the Blue Ribbon sale, must feel that "it never rains but it pours." Before the first day's sale was over it was announced that his mother-in-law was dead. Bidding dragged, and while some good sales were made and the guideless wonder, Joe Beppo, made a great exhibition, the rain came down so hard that everything was declared off. Less than half the horses on the ground were offered. The management must of necessity be heavy losers.

Walnut B. will be prepared for the races at Kansas City, Kan., and should be a good one in his class. He is fat and strong and has been jogged all winter, and should get into shape very fast. Try Me, 2:24 1/2, and Walnut B., 2:13 1/2, will probably be raced by Tom Ervin at the Rich Hill June meeting. They should be good in the races, as Walnut B. is likely to get a new mark for his uri bred pacer. This will require him to be 2:06 or better. The fastest heat was 2:03 1/2, by Gyp Walnut, a gelding and a mare.

NAIL WOUNDS IN HORSES' FEET.

Editor RURAL WORLD: We have just had a fine driving horse badly lamed by stepping on a nail and as our treatment cured him in a few days, will give it. The lameness was attributed to a sprained pattern, and four days after we noticed it I was renewing the shoe and discovered the nail hole.

The hole was enlarged with the hoof knife and about a tablespoonful of matter ran out, we then syringed out the pus cavity with 10 per cent solution of carbolic acid, syringing this out in five minutes with a 5 per cent solution. Then we filled up the cavity as well as we could with finely powdered borax, this was left until the next morning, when it was washed out with syringe and 5 per cent carbolic acid solution.

It was again packed with borax and left 24 hours, when the full treatment was repeated. I drove him four miles and back on the fourth day, and when we began to treat him he could scarcely put his foot to the ground. Our reason for using the 10 per cent solution of carbolic acid at first was to slightly cauterize the sore and to thoroughly cleanse it of any foul matter.

If anyone has a better method I want to hear of it. C. D. LYON, Southern Ohio.

HANDLING THE HORSE.

Dr. Currier believes in the kindergarten for young colts, and said that he liked to begin the education of the colt when not more than a day old, says the "Co. Gen." First catch the colt and hold him by putting one arm in front and one back of him. The pivotal point of action is the center of the body; fasten him in front and he tries to go backward. Fasten him at the rear and he tries to go forward. We should understand this law, which is a part of the nature of the colt, when we try to govern him. You can easily hold the colt if you place one arm under the neck and the other under the hind leg. Handle the colt first on one side, then on the other, then give him a lump of sugar. He may eat it at first, but pass it across his mouth and he will soon learn to like it.

You have now shown the colt your power over him, and that you do not wish to hurt him. Next give him a lesson in the use of the halter. If you put the halter on him and pull, he goes back. To counteract this, place a strap around his body just in front of his hind legs. Attach a rope to this, and run it through a ring in the halter. When the colt goes back, pull him up to you, then give him some sugar.

When you are able to handle the colt well with the halter, give him some lessons in driving. Let the old horse teach the colts their first lesson, and to do this, I take a pair of old carriage wheels on an axle. To these are clipped two wooden bars, 14 feet long, about two feet from the ends; the longest ends, extending in front, make the hills for the old horse. A cross-bar is placed just in front of the wheels, extending out far enough to hitch the colts on either side of the old horse. The colts are hitched to light bars placed in front of the horse, with ropes arranged at the sides to keep the colts in place. They soon learn from the old horse what to do, and they get used to hearing the wheels roll behind them, so that they are not afraid when hitched to a wagon.

Stallions should not be tied by the head in narrow stalls, or even kept continually in box stalls or small yards, but should be worked or driven daily, to sustain the vigorous digestion that comes from muscular exercise, and get the fresh air and sunshine, all which are as necessary to the health of the horse as for the human family. All the usefulness of the horse consists in his action, movement and work; they are comparatively worthless when idle boarders on our hands—feed, care and muscular energy are thrown away. It would be far better if stallions were kept at work every day, out of season. If owners of brood mares would insist on patronizing only the sires that are in the harness and kept at work daily, the result would be profit to the owners of stallions, and also to the patrons, as the offspring would be stronger, and there would be an improvement in the feet and legs of our horses; also in endurance and constitution.

The Osgood Scale Co., Binghamton, N. Y., can make it an object to three or four good live men in every county to look after their interests. Better write them to-day for particulars.

THE HORSESHOER IN DEVELOPING SPEED.

The shoeing of the horse is at no time a mere mechanical operation, but when the aid of the craft is employed for the direct purpose of developing speed, more than ordinary experience, judgment and skill are required. My experience in such cases has been complete success when I have been permitted to exercise my own judgment, writes a practical shoer in the "Horsehoer's Journal."

Speaking of using one's judgment recalls to my mind an instance of a few months ago. A horse was brought to me with specific instructions as to how he should be shod, with a view of increasing his speed. I followed the instructions to the letter, and was not at all surprised to have the man come back the following day with the horse, complaining that the speed of the animal was very much lessened. I showed him plainly that his directions had been complied with, then requested the privilege of shoeing the horse according to my own ideas. He assented, and after the first trial returned much elated to inform me that the horse exceeded his former speed by two seconds.

On removing the old shoes I noticed that the outside of the front ones and the inside of the hind ones were worn. I weighed the old shoes, and made the new set of the same left, but placed additional weight in the part that were most worn in the old ones. The front feet were leveled off, a little or no cutting being necessary, and the same treatment was given the hind feet except leaving the outside heels high. This was a very peculiarly gaited horse for a trotter.

A great mistake is often made by horsehoers and trainers in instances of this kind, and one which is a serious handicap to the horsehoer is the command to shoe a horse exactly as before, the owner losing sight of the fact that the horse has been worn for some time, and are much lighter in weight than when new, consequently when replaced by new ones according to instructions, the additional weight lessens the speed, and the blame is then placed on the farrier. However, the fact is that the horse was worn, who is thoroughly acquainted with the gait, etc., of his horse, can give valuable points to the horsehoer, and with the latter's experience and skill the speed of the horse can be materially increased.

THE AMERICAN HORSE.

We read in Genesis 1, chap. 25-26, that "God made the beast of the earth after his kind and cattle after their kind, etc." It is fair to assume that the horse was included in that category, says D. M. Sanford in "Spirit of the West." It is also recorded that man was a later creation, so we must assume that the horse was not only created as soon as the earth was formed, and in condition to sustain animal life, but that he was created for a purpose, so laudable that his extinction will not come about while man continues to occupy the earth.

History bears us out in asserting that the horse has been a constant factor in the evidences are plenty to show that the horse has existed from the beginning of life on the earth. Numerous authorities are on record showing that the horse has come down to our times through evolutions as great as it has been in man. The law of the "survival of the fittest" asserts itself so slowly yet so unrelentingly that we must acknowledge its great truth, although the changes in one life form are almost unnoticeable. The vicissitudes of time bring to us many facts worthy of note relative to the horse. The laws of supply and demand have often tipped the scale from one extreme to the other owing to panics or times of war in which great changes have been wrought in values, the latter being now manifest in high prices and a great scarcity of available mounts for war purposes abroad. In all these changes it appears that the American horse is very much in evidence, as he is being sought for in almost every foreign country we might name, either as a war adjunct or for the race track. Experience, it is said, teaches a dear school, and yet how few breeders see the end from the beginning clearly and stick to the matter of breeding sound horses through a series of years of depression in prices. It is now self-evident that the present shortage and high prices were brought about by breeders abandoning well fixed principles only a few years ago, when the horse was not even possessed a single brood mare, much less anything marketable.

Turning now to the realms of pleasure, who is there who has loved and driven a fine equine, that has not often enjoyed that indescribable something telegraphed through the reins, which brings an ecstasy of joy beyond compare. To be transported through space by any mechanism devoid of brain, nerve and actual life force is to close the eyes of the soul and glide swiftly over a smooth road behind a spirited horse is to open them. At such a time he who enjoys his lovely steed, revels in the labyrinth of the world's best pleasures such as the inventions of man in mechanical contrivances can never hope to equal. Show us the individual who loves and enjoys driving a spirited horse and we will show you a being who has noble impulses lurking somewhere in his nature. An intimate acquaintance with the horse was given to man for his assistance in performing labor; also for his pleasure.

What the breeders and lovers of fine horses in this country need to enter into the spirit of the business with renewed energies, backed up by careful and constant study, as to what types the markets of the world most demand. And when this is definitely ascertained, follow out the problem for a life time, raising just the types they are familiar with, and when the time comes for a time arrange to carry the surplus until the scale tips the other way, when large profits are sure to be realized. To breed live stock upon any other plan is, to use an old saw, "to kill the goose that lays the golden egg." Farmers have long since learned to plant corn and sow small grains every year so that if one thing does not hit another will. Then why not raise horses upon the same practical plan, and always succeed? There will soon come a time in this country when the government will take up the matter of horse breeding upon scientific lines, and then may we look for and expect a higher type of the horse to soon be evolved from the numerous breeds than has yet been produced in the whole world. This is not a dream, but the demands for the highest ideal in the different breeds both in this country and abroad will bring these results. No other country

can offer better inducements to breeders than the North American continent, and the sooner the people awaken to their unusual opportunities for breeding the highest types of horses to be produced, the better will they fare financially.

Now that the country is well rid of the scrubs, let the intelligent breeders of our country aspire to produce the best and thereby receive their just recompense for their labor.

ESSENTIALS IN BREEDING.

In breeding the light-harness horse, or more especially the American trotter, few men aim at producing a pacer, the theory of breeding is followed closely, yet how rarely is practical horse sense brought into play, says the "Horseman." Most men think the pacer is all that is necessary, and after collecting the choicest blood lines for the breeding stud, expect great results, unmindful of the fact that they have left out the horse. First the pedigree, then the horse, but be sure you have the horse. Practical horsemen have succeeded with little trotting blood where mere theorists have failed with half the trotting register represented on the farms for the reason that the former have never lost sight of the fact that to produce excellence one must have excellence to begin with. Individuality, temperament, conformation, action and gait are fully as essential as mere blood lines, and the latter, when coupled with the lack of all these essential qualities is as worthless as cold blood; in fact, more trotters have come where these good qualities were pronounced than from pedigree alone.

The trotting instinct is intensified through long lines of trotting blood, yet this instinct loses its power, its value is destroyed unless conformation, temperament, etc., are such that the structure can carry out the instinctive power. Of all the evils of conformation none are more far-reaching in results than coarseness, for a coarse horse can rarely be a stayer and will transmit this undesirable quality through many generations. Substance is absolutely essential in a race horse or trotter. Yet there is a vast difference between substance and coarseness. The former quality, when applied to horses, signifies solidity, firmness, strength, while coarseness is flashiness. Quality is just the opposite of coarseness, and signifies fineness. Yet this is frequently confounded with lightness, although quality and substance always go together in anything like perfection in horseflesh. The ideal horse that is inducted for speed must have the strength to carry his speed, the substance to enable him to stay, and the properly enabled his functions to act properly. There are certain structural points that are very essential in the trotter as in the thoroughbred. Not for the mere sake of beauty, but because the various functions require certain shapes in which to act.

The heart and lungs to fully do their part require plenty of room, consequently great depth of girth, or as it is called, depth through the heart, is necessary. Short backs are not as likely to be strained as long ones, and in the legs short cannon bones stand the strain of a great concussion better than long ones. There are certain rules governing the conformation of all horses intended for speed just as there are for heavy draught horses, and as these two types are diametrically opposed to each other any infringement of the one on the other brings disastrous results. In this respect breeders of the heavy draft horse have shown more judgment than trotting horse breeders, as the former have never selected for their own use the type of the trotter, and breeders of trotters frequently use mares and stallions that more closely resemble draft horses than any other breed. To produce a type one must follow the type and not include every known species in one's ideas of conformation.

Veterinary.

Answers to questions in this department are given by Dr. E. H. White, former State Veterinarian for Missouri, Sedalia, Mo. Write questions on one side of paper only, and separate from other business. Those wishing a written reply privately must accompany their requests with a fee of one dollar, the professional opinion being one of private advantage, and on the top.

WORMS.—B. S. Avon, N. Y.: "(1) A mare has pin worms and will not shed her hair. The veterinarians have been treating her and do not do any good. She has lost all spirits since she did not shed her hair last year. (2) Another mare has swellings on the hind leg at ankle and back in cold weather. A blister made it run and made her much worse. The swellings sometimes run to the hip." Reply: (1) Have the teeth put in good order. After feeding brimstone alone for twenty-four hours have the veterinarian give a full dose of Barbadoes aloes in shape of ball. Follow up with one dram of dried sulphate of iron and two each of ground gentian and ginger roots and one of saltpeter three times daily for ten days, then twice daily for another period of two weeks. If the worms are in the rectum it would be well to inject by means of a hose and funnel a half pailful of soapy warm water in which has been mixed a half pint of tobacco tea made by steeping tobacco stems in boiling water. (2) The case is a very suspicious one, as the symptoms point to either farcy or glanders, and that being the case, we do not feel warranted in prescribing.

Look at that Leg!

THOROUGHLY SPAIN AND RINGBONE CURED WITH HAMER'S SURE CURE or money refunded. Also Fissures, Poll Evil, Founder, Sweeney, Distemper, Vireo cure, White Swell, Curbs, Splints, Calf Sore, Saddle sores, Sprains or Swellings, \$1.00 per bottle by mail. Send for 44-page pamphlet telling the whole thing, also numerous testimonials. Sold by druggists. H. H. HAMER, Vermont, III.

SADDLES

on both English and Western. In the States, Europe, India, etc. W. H. Dillingham & Co., Louisville, Ky. Mention The Rural World when you write.

THIS BUGGY DIRECT

To Use \$32.75. See good wheels, axle, springs, etc. Guaranteed ONE YEAR. Best work, lowest price. Sent by Express. CHAS. C. CLARK & CO., 225 S. 1st St., St. Louis.

CASH OR CREDIT.



Catalogue FREE.

PRICE \$31.50

It will pay you

to send for our Catalogue No. 6, quoting prices on Buggies, Harness, etc. We sell direct from our Factory to Consumers at Factory Prices. This guaranteed Buggy only \$31.50; Cash or Easy Monthly Payments. We trust honest people located in all parts of the world.

Write for Free Catalogue. MENTION THIS PAPER.

CENTURY MANUF'G CO., East St. Louis, Ill.

O. W. McCLAIN.

J. W. BIGGS.

DEALERS IN—

HORSES AND MULES.

Will sell 1,500 Horses and Mules on May 20-21-22, 1901, at Public Auction and Private Sale.

Special Attention Given to Filling Orders at all times.

BURNS, OREGON.

LACKWATER STOCK FARM.

MONROE, No. 29025—Sired by Allandorf 7452, record 2:19 1/2, by Onward 2:35 1/2; son of George Wilkes; dam Monitor Rose by Monitor 1827; 2d dam Bay Dixie by Abolitionist Jr., 8720; 3d dam Dixie by Pilot Jr., sire of Maud S.; 4th dam Jenny Lind by Bell-founder.

Henry Wilkes, sired by Ashland Wilkes, 2:17 1/2 (sire of John R. Gentry, 2:04, and others); in 2:30; 1st dam Bonnie C. by Joe Kimo; 2d dam Nettie by Blackwell's Hebronian Jr.; 3d dam Mollie by Bay Eagle, thoroughbred son of the great grey Eagle.

These Stallions are not only royally bred but bred right. MONROE stands 15 hands high, good flat bone, weighs 1500 lbs., and has shown his ability to trot in 2:15; has a record of 2:04. Will be marked this year.

HENRY WILKES is a noted show animal, possessing more style and beauty than any body's horse. Awarded 1st premium in Roadster and all purposes, wherever shown; two \$40 silver medals Kansas City Inter State Fair. Will make the season at my place. For extended pedigrees and terms, address:

ROLLA C. BROWNLEE, Holden, Mo.

1901.

1901.

PRAIRIE VIEW STOCK FARM,

Will keep for service the following stock:

WALNUT BOY 2:11 1/2, Brother of (Bellie Andrews 2:08 1/2) (Victorian 2:30).

Sire of Gyp Walnut 2:08 1/2; Walnut B. 2:12 1/2; Robble C. 2:14 1/2; Dan T. 2:16 1/2; Monnet 2:17 1/2; Joseph R. 3 y. 2:32 1/2; Dr. Port 2:30.

ONWARD BOY, by Onward Fewel, record 2:11 1/2; a dam by Walnut Boy 2:11 1/2. This horse is a black, 16 hands high and one of the best gaited trotters in Missouri.

ALLISON BOY, by Walnut Boy 2:11 1/2; 1st dam by Andrew Allison, sire of Albert Allison, 2:10 1/2; and others, 2d dam an inbred Clay mare. I consider Allison Boy, one of the best, if not the best son of Walnut Boy 2:11 1/2.

SUNSET SENIOR, Standard and registered, saddle, goes the gates and cannot be beaten for style.

All of these horses are standard bred. I also have six Jacks, all black, from 15 to 16 hands high. Stock for sale. For full particulars and pedigree, apply to

J. G. CALLISON & SONS, Windsor or Leeton, Mo.

MISSOURI STATE FAIR,

At Sedalia Sept. 9 to 14.

State No. 1—2:40 Class Trot.....\$ 500

State No. 2—2:30 Class Trot.....\$ 500

State No. 3—2:20 Class Trot.....\$ 500

State No. 4—2:10 Class Trot.....\$ 500

State No. 5—2:00 Class Trot.....\$ 500

State No. 6—2:30 Class Pace.....\$ 500

State No. 7—2:25 Class Pace.....\$ 500

State No. 8—2:15 Class Pace.....\$ 500

State No. 9—2:05 Class Pace.....\$ 500

State No. 10—10-3-year-old under.....\$ 500

Home Circle.

ONE DAY AT A TIME.

One day at a time! That's all it can be;
No faster than that is the harvest fair;
And days have their limits, however we
Begin them too early and stretch them
too late.

One day at a time!
It's a wholesome rhyme!
A good one to live by,
A day at a time.

One day at a time! Every heart that
aches,
Knowing only too well how long they
can seem;
But it's never to-day which the spirit
breaks—
It's the darkened future, without a
gleam.

One day at a time! When joy is at height;
Such joy as the heart can never forget—
And pulses are throbbing with wild de-
light.
How hard to remember that suns must
set.

One day at a time! But a single day,
Whether it's load, whatever it's length;
And there's a bit of precious Scripture to
say
That, according to each, shall be our
strength.

One day at a time! 'Tis the whole
All sorrow, all joy, are measured there-
in:
The bound of our purpose, our noblest
strife.

The one only countersign sure to win!
One day at a time!
It's a wholesome rhyme!
A good one to live by,
A day at a time.

—Helen Hunt Jackson.

Written for the RURAL WORLD. A RECIPE WITH VARIATIONS.

We are all familiar with the dear old
melodies with brilliant variations, which
not only delight the musician but even
those who claim to have little knowledge
of music; but it is the same old song.
Now, this is what a housekeeper will
do with a few good recipes; she will mas-
ter them, and then have variations of
them. Many housekeepers undertake
to learn how to make too many kinds of
cake and in consequence often feel that
they do not make good cake. When visit-
ing a friend, if the cake served is nice,
the very next thing is to ask for the re-
cipe for it, and thus an endless collection
of recipes will be secured, and the one
having them may not be regarded as even
a fair cake baker. It would be far wiser
for a housekeeper who has so many
other duties to absorb her thoughts and
time than the single one of baking to
secure two good cake recipes and learn
to use these so failure is seldom known
in a cake; and three are all any general
housekeeper should ever attempt. These
should be a good solid cake, a good layer
cake, and a cheap plain cake, that may
be eaten warm, when baked as a solid
cake, or baked in layers when to be used
fresh, and if there is no time to spend on
the best cake. Farmers' wives know that
there are times when a cake must be
made "on a rush," and then the plainer
cake the more apt is success to re-
sult. Now, these suggestions do not
mean that we should not study the cook
book, or cooking recipes wherever found.
Just the reverse is true.

I have only two cake recipes, but I have
many kinds of cake from them. I have
learned just the proper amount of each
ingredient to use according to the dimen-
sions of my cups and spoons, and the tem-
perature of the oven, and these are im-
portant factors in cake baking. I refrain
from giving these least one other woman
will not have the same sized cups
and failure would result. The schools of
domestic science advise the use of the
measuring cups and spoons. With them
there can be no mistake. When I mix a
cake I expect it to be good.

Now for the variations. I carefully
note all recipes for cake fillings. These
really are what make variety in layer
cake. I will venture my recipe for boiled
icing, which also has its variations. To
one medium sized cup of sugar put four
tablespoons of cream or milk. Stir
while boiling, and boil until the sugar
composes to the sides of the pan.
If cream is used, put in a
piece of butter about the size of a hickory
nut and a little more if milk is used.
Then add the flavoring. Let the strup
boil a few moments after the butter is
added. Beat until cool enough to spread
on the cake. If the cake is large and
the icing is used for filling, two cups of
sugar and eight spoonfuls of cream will
be required. If cocoanut or grated cho-
colate is added to this icing for a filling
and the top of a cake with perfect suc-
cess. Seed raisins, citron and nuts may
all be chopped fine and stirred in this icing
or any one of them, and you have a dif-
ferent variety of cake. My best cake is a
white one, and the chopped nuts, raisins
and citron make a cake fit to grace any
table, even when the daughter is a bride.

When a white cake is baked there are
also variations planned for the yeika. By
adding two spoonfuls of flour to two
yeika, two spoonfuls of sugar, a half
teaspoonful of ground mustard, cup and a
half of water and large spoonful of but-
ter, you will have a delicious lettuce
dressing. It should be thinned with vine-
gar. Then the yeika are often saved in
the shells, stacked in the double boiler
and cooked for egg sandwiches, or sliced
over potato salad. Or they are used in a
corn starch pudding. This, too, may
have cocoanut added to it or grated cho-
colate for variety. I have used both on
very state occasions.

The work of the cook may be much
simplified and the menu served much
more varied if the foundation part be
one of which she is master, and the trim-
mings be made to accomplish the varie-
ties.

MRS. MARY ANDERSON.
Caldwell Co., Mo.

Written for the RURAL WORLD. LOOKING FORWARD.

Let us take Paul for example, in that he
says, Phil. 3, 2, 3, 4: "Forgetting those
things which are behind, and reaching
forth unto those things which are before,
I press toward the mark for the prize of
the high calling of God in Christ Jesus."
The question is, how do we fulfill this
high calling? How much lighter life's
burdens would be if more of us would
practice the foregoing? What good can
come from looking backward, and lament-
ing about things that cannot be helped?
Let us rather look forward and see where
we can do better. If we have suffered
through some mistakes others have made
(often times from persons who are very
near and dear to us) that does not help
us now. We can profit by their mistakes
and try and make some one's lot brighter,
and thereby forget our own troubles.
Many times when one feels depressed and
thinks her lot is hard, that is the time to
go and visit a sick friend, who is shut
in. How thankful we then feel for our
mercies!

I was amused a few days ago when
visiting a sick friend, and the little three-
year-old baby, as we were leaving, said,
"Come again; come again." He seemed
to enjoy our visit so much, and all be-
cause the young lady who was with me
had taken off her glove and played mar-
bles with him. I can see his bright
little face now, when I told him I had
a large marble at home that he should
have. He had played with, and who, had
he lived, would be a grown man now. He
listened very attentively, and then asked:
"Did your boy play like I do?"

We sometimes hear from mothers re-
marks like this: "I dread the time when
my daughters will be out of school, be-
cause they will have nothing to do." No
thing to do? If only they would look
around them, how much they would find
to do. Some could help the very mothers
who wonder what there will be for the
daughters to do. I know of some daugh-
ters that have more to do than they are
able to accomplish. Let the daughters
learn to make good bread, cakes and
pastry. If in after years they have help,
they will know how to direct it. I know
of a young girl who makes all of her
shirtwaists and makes them well. Also
teach the girls to iron. A mother who I
know could help a dolly as it should be.

The young people must have something
to occupy their time, and they had bet-
ter be learning something useful than be
continually on the street with apparently
no aim in life, as we see them here. We
know there are better things in life than
that.

I love to read the articles in the Home
Circle, especially the writings of those
whom we knew—Mrs. Helen Watts Mc-
Creary for instance. Samuel Miller's de-
scription of his daughter's bay window was
enjoyed. We have no bay window, so
must be content with a sword fern that
commands universal admiration. We are
fortunate in having kind friends, who
give us cut flowers, such as carnations
and sweet violets. These are friends that
Margaret E. Sangster writes of. "Oh,
friends, if you have flowers to bring me,
bring their bloom and fragrance now."
These are the bits of kindness that we
appreciate. I will cease for this time,
perhaps I may come again and give my
opinion concerning the topic "That the
men meet their wives with a smile," as
we tire somewhat of the oft-repeated ad-
vice to "meet your husband with a smile."
Pettis Co., Mo. A READER.

By all means tell us of the new order
of the men greeting their wives with
smiles. The dear sisters do get their
full quota of admonition and a little for
the brothers will be wise.

Written for the RURAL WORLD. THOSE WILD SALAD PLANTS.

Mrs. Cody, I want to thank you for
your article in RURAL WORLD of April 3. For
three weeks we have been using the wild
lettuce you speak of. We also use prickly
lettuce or the L. Scariola of the botan-
ists. The dandelion is now large enough
to use, and we find some plants of a
wild chervil that are very nice. The
dandelion leaf made corn salad in the
spring; ours grows semi-wild on a
hillside. It is a grand lettuce salad. Shep-
herd's purse is the earliest mustard, and
we have had "boiled greens" twice from
it. The common black mustard is now
coming on fast, as are lamb's quarter
and some other weeds which we cook by
the peck.

Our asparagus is just peeping. We will
use it twice or three times a week for
two weeks or until peas come.

Water cress is delicious. We have no
place to grow it, but those who can do
so should never be without some along
the shallow edges of a brook or spring
branch.

Anyone who has ever cultivated the
dandelion will be surprised to see how
large and fine it will grow under even
slight care. The wild lettuce Mrs. Cody
writes of could be easily grown by sow-
ing the seeds in September in some shel-
tered spot with southern slope. These
wild salad plants may not suit all tastes,
but we think them fully as palatable as
any winter lettuce we ever grew, and we
have grown some very fine beds of it.

C. D. LYON.
Brown Co., Ohio, April 23.

Written for the RURAL WORLD. USE HOME-MADE CANDY.

Here are a few recipes. I hope some of
the H. C. readers will give them a trial
and tell us how they like them. If any
of the readers know how to make candy
potatoes, I wish they would give us the
recipe. I think they are made of fondant
and cocoanut, then formed into shape and
eyes marked and then rolled in cinnamon.
They are good, however, as I would like
to know exactly how to make them. We
make all our own candy and know it is
much purer than the colored stuff gener-
ally bought for little children to eat.
Children love sweets, and I think they
ought to be given some good candy. In
one of my cook books this statement is
made: "Parents do their children a great
injury by denying sweets. The child re-
quires a larger amount of sugar relative-
ly than do grown persons, for the sugars
assist in the processes of growth as no
other food element can possibly do in its
stead. By this we do not mean that the
child should have free access to all the
sweets, candies, and the like he can eat
at any one time, but rather that each day
a certain amount should be given him,
preferably at or immediately after each
meal. If this is done, the child will not
have the unnatural craving for sweets, in
which he will indulge himself, if opportunity
is offered." It is taken from an
article on the "Partial Starvation of Chil-

dren," by Dr. Wm. O. Krohn of the East- ern Illinois Hospital for the Insane.

We make chocolate creams, butter
scotch, molasses candy, molasses nut
balls, hoarhound, lemon and peanut
candies, peppermint, lemon and ginger
drops, etc. It has been a long time since
we have bought any candy, and to make
two or three kinds at one time the candies
will last longer and cost much less than
would the same quantity bought. There
were several good recipes for candy in
the RURAL WORLD last winter which we
tried and liked very much. M. E. W.

Written for the RURAL WORLD. THE HOME CIRCLE "MEET."

Oh, what a pleasant suggestion was that
of Ina May's concerning the circle meet-
ing at the World's Fair in St. Louis! I
move that she select the day and time of
meeting, so no mistakes will be made;
and when the roll is called I'll try to be
there. It is a long time off, and many
things may happen in that space of time.
As for me sending my picture to the pa-
per, to tell the truth, I have not had my
picture taken for 18 years. The one I
have does not resemble me much now.
I think others might respond more
promptly. Mrs. A. P. I think your's
might come next. And Mr. Heaton's would
not be out of place, or any of the gentle-
men that have contributed to our col-
umns.

Ina May, I will tell you how I read
Mr. Heaton's Latin. I just call it "Moses"
and proceed, so it never confuses me.
I would like to get a liquid yeast recipe
for making light bread. I got yeast from
a friend once that was grand. She did
not make it, and I never could get the
formula. After a time it lost its strength.
This yeast resembles milk in color, and
it would pop like a gun when a bottle of
it was opened.

I will send my recipe for getting rid
of bedbugs. If used plentifully they will not
molest a bed: Five cents worth of cor-
rosive sublimate and a dime's worth of al-
cohol. Label it poison. Apply to all crevices
with a feather.

MRS. EMMA SEE ROBERTS.

Audrahn Co., Mo.

SPECIAL HELPS.

TO SETTLE DUST—Did you know that
a handful of coarse salt scattered
over the kitchen floor before sweeping
will gather the dust and lint and make
the room look very much cleaner?

LABELING FRUIT CANS—Save the
flap of unused envelopes to mark your
fruit cans with, name of fruit and year;
they will stick readily and save time and
trouble to make paste. Where one has
labeled fruit cans once she will never
omit it.

HOME-MADE SILVER POLISH—
Wash the silver in hot suds; apply fine
laundry soap to a piece of soft flannel,
dip it in common whiting and rub the
silver. Wash again in hot suds, rinse
thoroughly and dry with another piece of
soft flannel or chamois skin. This com-
bination will remove the most obstinate
discoloration quickly.

TO FRESHEN A CARPET—After
thoroughly freeing it from dust by means
of shaking and sweeping, put down the
carpet as usual, and then proceed to rub
it with a flannel wrung out in soap-
suds. The bits of kindness that we ap-
preciate. I will cease for this time,
perhaps I may come again and give my
opinion concerning the topic "That the
men meet their wives with a smile," as
we tire somewhat of the oft-repeated ad-
vice to "meet your husband with a smile."
Pettis Co., Mo. A READER.

By all means tell us of the new order
of the men greeting their wives with
smiles. The dear sisters do get their
full quota of admonition and a little for
the brothers will be wise.

LAUGHTER A HEALTH PROMOTER.

In the "Problem of Health," Dr. Greene
says that there is not the remotest com-
mon or little inlet of the minute blood
vessels of the human body that does not
feel some wavelet from the convulsions
occasioned by good hearty laughter. The
life principle of the central man is shaken
to its innermost depths, sending new
tides of life and strength to the surface,
thus materially tending to insure good
health to the persons who indulge there-
in. The blood moves more rapidly, and
conveys a direct impulse to all the
organs of the body, as it visits them on
that particular mystic journey when the
man is laughing, from what it does at
other times. For this reason every good
heartily laugh in which a person indulges
tends to lengthen his life, conveying, as
it does, new and distinct stimulus to the
vital forces.

KEEP THE BALANCE UP.

It has been truthfully said that any dis-
turbance of the even balance of health
causes serious trouble. Nobody can be
too careful to keep this balance up. When
people begin to lose appetite, or to get
tired easily, the least imprudence brings
on sickness, weakness, or debility. The
system needs a tonic, craves it, and
should not be denied it; and the best tonic
of which we have any knowledge is
Hood's Sarsaparilla. What this medicine
has done in keeping healthy people
healthy, in keeping up the even balance
of health, gives it the same distinction as
a preventive that it enjoys as a cure. Its
early use has illustrated the wisdom of
the old saying that a stitch in time saves
nine. Take Hood's for appetite, strength,
and endurance.

Two Big Pains

seem to be the heritage of the
human family everywhere, viz
Rheumatism
and
Neuralgia

but there is one sure and
prompt cure for both, viz
St. Jacobs Oil

I will say to Mrs. Baldwin that I am
tolerably familiar with the American
Standard of Perfection, but do not revere-
ence it by any means. It is merely the
recorded opinion of certain self-styled,
prominent poultry men as to the proper
marking, size, etc., of the several breeds.
They are no more infallible than other
people, and are no more prominent than
plenty of other poultry men who disagree
with them, and who have no use for the

DO CHILDREN PAY?

"Do children pay?" said old man Scruggs,
a-leantin' on his hoe,
"Jest wait 'til you've been married, say,
some twenty years or so.
You'll have more sense than to stand up
there and throw your time away.
By askin' such foolish questions. Pay! Great
gosh! Of course they pay."

"We go home tuckered out at night,
they'll climb upon our knees,
And when we try to keep 'em down,
they'll cry for one more squeeze,
And man and pluck about us all, until fast
they know we know."

"Our joints are free from achin' and our
hearts are in a glow.
"They pay us when their frank young
love shines out in their jolly eyes;
Even when our ears are deafened, there's
a music in their cries,
Sweeter than all the fiddles and pianos
ever made—
Don't think it's so? Well, now, you wait,
and 'member what I've said."

"The man whose children's hearts are his
is the man who is truly blest;
The sight at home of his boys and girls
is more to him than rest.
I saw! There wouldn't be half the fools
in this weary world to-day
If all men only could understand what
big intrus' children pay."

—Browne Perriman.

Poultry Yard.

J. G. KINDER HAS GOT OUT OF THE PIGEON HOLE.

Editor RURAL WORLD: Your space
would not, of course, permit my answer-
ing in detail the several correspondents
who take issue with me on the subject
of poultry breeding; furthermore, I have
no desire to enter into a personal contro-
versy with any one on any subject. I
have had, during the past 40 years, actual
experience with about a dozen of the
different breeds of chickens, and they, at
least, were average specimens. I claim,
therefore, to know something of what I
am talking about, though some of your
correspondents seem to doubt it.

In such correspondence it is understood
that opinions are submitted for what they
are worth; there is nothing compulsory
in their acceptance. Even Mr. Smiley's
"Knows" and "does he know" are mere-
ly his manner of expressing what he
thinks he knows. Let no reader of the
RURAL WORLD think for a moment
that I am not ready and willing to main-
tain my position against all comers. If
I fail in doing it, it will be the first time
it ever happened. Let all the readers be
the jury, but don't all jump on at once.

Theo. Hewes, than whom the state of
Missouri nor any other state has pro-
duced a peer as a poultry judge and breeder,
has stated over his own signature,
that there had been no perceptible im-
provement in the Plymouth Rock in 20
years. He ought to know, and if not,
why not? Had he only gone farther and
stated that there had been no real im-
provement in any other breed of chickens
in the last 50 years, because of the absurd
breeding to feather and other fancy points
that doesn't amount to a hill of beans, then
he would have come nearer to telling the
whole truth, and nothing but the truth.

A year or two ago a comparative test of
all the leading breeds of chickens was
made by an Eastern agricultural institu-
tion or experiment station, the exact lo-
cation I cannot now recall, for the purpose
of ascertaining under good and exactly
similar conditions the comparative value
of the different breeds. Now, some blith-
ing idiot, who no doubt had it in for
the feather fiddlers, suggested putting in
a yard of common mixed chickens, mongrels,
dunghills, if you please (and cross bred
is a dunghill to a score card worshiper).

Well, the result was that this yard of low
breeds didn't do a third to the best of
"line bred," "inbred," "ring breeder" and
"striped aristocrats," but go ahead and lay
more eggs and prove to be the most profit-
able yard of the whole batch!

No doubt this surprised a great many,
but would be no surprise to 90 per cent
of the farmers' wives who read the RURAL
WORLD and have done so much
towards making Missouri the leading
poultry state in the Union, for it exactly
accords with their own experience, that
mixed breeds are hardly more active and
vigorous; more prolific, and more profit-
able, than pure breeds, and this is the true
reason why 90 per cent of the poultry
that comes to the St. Louis market is of
mixed blood. It may be true, as one cor-
respondent states, that pure breeds are
too valuable to send to market; but aside
from their fictitious or fancy value, it is
strange that their real value has not been
recognized in the past 50 years, and the
same advancement made as is noted in
the breeds of sheep, hogs, cattle or horses.

The fact of the matter is the real value
of pure bred fowls has been smothered—
sacrificed, in fact—in absurd efforts to
conform to an arbitrary and absurd so-
called standard of perfection. Such extra
value does not exist, and never can exist
until there is a reform in breeding.

About a year ago there was a dressed
poultry exhibit at one of the leading
Eastern poultry shows. No dunghills were
entered in competition, but about the
same thing was the Rhode Island Red;
a breed supposed to be a mixture of Pit
Game, Shanghai and most any rooster
that came down the pike. Their plumage
was much like and as beautiful as a
dappled dun mule. Now the Rhode Island
Reds had not broken into the standard at
that time; all the same, they walked off
with the blue ribbon as the most perfect
dressed fowl for market. The chickens
with all the so-called American breeds,
with their dunghill-Asiatic ancestry.

Now, such evidence as this would not
convince a feather crank, and is not ex-
pected to, but there are a whole lot of
common, every-day people who will be-
lieve to know that it isn't necessary to be-
lieve all the long-winded fairy tales they
see in poultry journals or about fabulous
breeds and fabulous profits, etc., that
are written mostly for the free advertis-
ing it gives and colored usually to favor
that particular breed that they have to
sell.

I will say to Mrs. Baldwin that I am
tolerably familiar with the American
Standard of Perfection, but do not revere-
ence it by any means. It is merely the
recorded opinion of certain self-styled,
prominent poultry men as to the proper
marking, size, etc., of the several breeds.
They are no more infallible than other
people, and are no more prominent than
plenty of other poultry men who disagree
with them, and who have no use for the

score card system of judging at all.

I would have no one think I am a dis-
gruntled exhibitor, as one correspondent
intimates, for I have my first entry to
make in a poultry show, so cannot be
classed as any sort of an exhibitor. I
attend poultry shows to study the differ-
ent types of fowls and human nature as
exhibited by the average chicken crank.
I find both very interesting. Nor would
I have any one think that I am down on
the different types of pure bred fowls.
They all have their place and their fixed
characteristics are essential in building up
any real improvement, which, under a
comprehensive common-sense system,
would make a wonderful advancement in
this great industry in the next decade; but
first we will have to stop all this gabble
of "barred to the skin," "beautiful buff
under color," "pure-white-stay-white
strains," quit going into raptures over a
"silver laced feather," or into comparisons
fits over a gray streak in a Brown Leg-
horn's sickle, and begin judging fowls
according to what can be proven they
can perform, "how soon," "how often,"
etc.

I will reply to one of Mr. Smiley's "does
he know." No, I don't know that de-
creasing the size increases the egg pro-
duction; furthermore, I don't believe it.
What I do believe is that excessive egg
producing, non-sitting classes like the
Hamburg or Mediterranean breeds, are in
danger of deterioration in both size and
vigor if great care is not exercised in
breeding at that season when the vitality
of the fowls has been exhausted by a long
season of constant egg production. I am
pleased to inform Mr. Smiley that my
largest Leghorn pullets, which weighed
over five pounds at eight months old, are
quite noticeably the best every-day layers
on the place; so much for common sense
and experience vs. Mr. Smiley's atten-
tion. I will also call Mr. Smiley's atten-
tion to the fact that the Mediterranean
class as represented by the Minorca, is a
refutation of the theory that egg pro-
duction necessarily decreases size. If
that theory would hold good, then a one-
pound Bantam should lay about five eggs
a day if a five-pound Leghorn can only
lay one.

I perhaps should amend my desire for a
Brown Minorca by wishing merely for a
Brown Golden or White Leghorn, and
of Minorca size; the housewife prefers
yellow-legged chickens and I have
heard that her preacher does also; there-
fore I am for yellow legs or any other
point fancy or otherwise, that adds real
value to the breed.

Come on, all ye fancy feather breeders
who are not in peacock or goose business
where feathers are the legitimate and
main object, and I will try and interest
you for a spell.

J. G. KINDER.

INCUBATORS.

Editor RURAL WORLD: Our lady
friends are having a good time exchang-
ing experience with incubators. Their
letters are interesting and instructive. I
have enjoyed them.

I have just set 362 Brown Leghorns and
50 B. P. Rock eggs in one 200-egg hot-
water, Sure Hatch incubator, and one 200-
egg hot-water Premier, and two 15-egg B. P.
Rock hens. This is to be trial hatch of
the hot-water and hot-air machines. I
will report the hatch later on.

St. Francis Co., Mo. E. W. GEER.

POULTRY POINTERS.

AT BRITTE'S POULTRY YARD.—Those
desiring eggs from Mrs. Wm. Britte,
should write her at once, as she will not
sell eggs after May 15. But will sell tur-
key eggs now for \$3 per 15 and B. P.
Rock eggs for \$1.50 per 15, until May 15,
or turkey eggs for \$10 per 100 and B. P.
Rock eggs for \$4 per 100.

ALBERT GUTGESELL, Alfred and
Scanlan avenues, St. Louis, Mo., breeder
of prize winning barred Plymouth Rocks,
the Empire strain; eggs \$2 per 15 straight
Leghorns, Pekin Ducks and White Guineas. All
eggs 10c each. Order any kind wanted (order and
pay). John B. Garboe, Box 3, W. Williams, Mo.
W. H. T. TURKEY EGGS (10 to 21 lbs. each),
\$1.50 per 15, \$1.00 per 10, \$3.50 per 5.
W. CAMPBELL, Rosemead, Ill.

EGGS FOR HATCHING.

From prize winning Mammoth Bantams; 10
mo. old tom 3 lbs.; hens 20 to 25 lbs. Eggs \$2.50
per 15, \$1.50 per 10, \$3.50 per 5. B. P. Rocks and
B. P. Rocks and B. P. Rocks, score 91% to 94%;
eggs \$1 per 15, \$3 per 10, \$3.50 per 5.
Mrs. John L. Giesler, Charleston, Ill.

EGGS FOR SALE.

B. P. Rocks, B. P. Rocks, Buff Cochins and W. P.
Ducks \$1.50 per 15, \$1.00 per 10, \$3.50 per 5.
Most eggs from highly scored birds.
Mrs. J. W. ATTERBURY, J. L. Madison, Mo.

EGGS FROM PRIZE WINNING BARRED PLYMOUTH ROCKS.

Eggs, Eggs, nothing but eggs. Fresh and fertile
from the best of Barred P. Rocks and Pekin Ducks.
Pen No. 1, \$1 per 15, \$3 per 10, \$3.50 per 5.
Pen No. 2, \$1 per 15, \$3 per 10, \$3.50 per 5.
Mrs. G. F. THORNTON, W. Williams, Mo.

SPECIAL EMPLOYEES STRAIN WHITE ROCK EGGS.

per 15, Mrs. J. E. MAY, Wilson, Mo.

EGGS B. P. ROCKS.

per 15, \$1.00 per 10, \$3.50 per 5.
Pure Hawking blood Eggs \$1.00 per 15, \$3.50 per 10,
from prize winners.
Mr. and Mrs. M. SMITH, Farmersville, Illinois.

EGGS FROM B. P. ROCKS.

per 15, \$1.00 per 10, \$3.50 per 5.
Mrs. Anna Anderson, Monett, Mo.

WHITE P. ROCKS.

Bred for eggs and early ma-
turity; eggs \$1.50 per 15, \$1.00 per 10, \$3.50 per 5.
E. S. DUNLAP, Fulton, Mo.

IF HE HAS A WIFE, HE SHOULD LOVE HER AND GIVE HER HIS PROTECTION AND NOT SUPPORT HER JUST FOR THE MONEY SHE MAKES HIM.

If he has poultry and does not love them
and find pleasure in raising them, he
should give them to some one else. Fowls
are living creatures and will return the
care bestowed on them."

PRES

The Markets

WHEAT—Cash Market—By sample: No. 2 red sold at 74 1/2c; No. 3 red at 74c; No. 4 red at 73 1/2c; No. 5 red at 73c; No. 6 red at 72 1/2c; No. 7 red at 72c; No. 8 red at 71 1/2c; No. 9 red at 71c; No. 10 red at 70 1/2c; No. 11 red at 70c; No. 12 red at 69 1/2c; No. 13 red at 69c; No. 14 red at 68 1/2c; No. 15 red at 68c; No. 16 red at 67 1/2c; No. 17 red at 67c; No. 18 red at 66 1/2c; No. 19 red at 66c; No. 20 red at 65 1/2c; No. 21 red at 65c; No. 22 red at 64 1/2c; No. 23 red at 64c; No. 24 red at 63 1/2c; No. 25 red at 63c; No. 26 red at 62 1/2c; No. 27 red at 62c; No. 28 red at 61 1/2c; No. 29 red at 61c; No. 30 red at 60 1/2c; No. 31 red at 60c; No. 32 red at 59 1/2c; No. 33 red at 59c; No. 34 red at 58 1/2c; No. 35 red at 58c; No. 36 red at 57 1/2c; No. 37 red at 57c; No. 38 red at 56 1/2c; No. 39 red at 56c; No. 40 red at 55 1/2c; No. 41 red at 55c; No. 42 red at 54 1/2c; No. 43 red at 54c; No. 44 red at 53 1/2c; No. 45 red at 53c; No. 46 red at 52 1/2c; No. 47 red at 52c; No. 48 red at 51 1/2c; No. 49 red at 51c; No. 50 red at 50 1/2c; No. 51 red at 50c; No. 52 red at 49 1/2c; No. 53 red at 49c; No. 54 red at 48 1/2c; No. 55 red at 48c; No. 56 red at 47 1/2c; No. 57 red at 47c; No. 58 red at 46 1/2c; No. 59 red at 46c; No. 60 red at 45 1/2c; No. 61 red at 45c; No. 62 red at 44 1/2c; No. 63 red at 44c; No. 64 red at 43 1/2c; No. 65 red at 43c; No. 66 red at 42 1/2c; No. 67 red at 42c; No. 68 red at 41 1/2c; No. 69 red at 41c; No. 70 red at 40 1/2c; No. 71 red at 40c; No. 72 red at 39 1/2c; No. 73 red at 39c; No. 74 red at 38 1/2c; No. 75 red at 38c; No. 76 red at 37 1/2c; No. 77 red at 37c; No. 78 red at 36 1/2c; No. 79 red at 36c; No. 80 red at 35 1/2c; No. 81 red at 35c; No. 82 red at 34 1/2c; No. 83 red at 34c; No. 84 red at 33 1/2c; No. 85 red at 33c; No. 86 red at 32 1/2c; No. 87 red at 32c; No. 88 red at 31 1/2c; No. 89 red at 31c; No. 90 red at 30 1/2c; No. 91 red at 30c; No. 92 red at 29 1/2c; No. 93 red at 29c; No. 94 red at 28 1/2c; No. 95 red at 28c; No. 96 red at 27 1/2c; No. 97 red at 27c; No. 98 red at 26 1/2c; No. 99 red at 26c; No. 100 red at 25 1/2c; No. 101 red at 25c; No. 102 red at 24 1/2c; No. 103 red at 24c; No. 104 red at 23 1/2c; No. 105 red at 23c; No. 106 red at 22 1/2c; No. 107 red at 22c; No. 108 red at 21 1/2c; No. 109 red at 21c; No. 110 red at 20 1/2c; No. 111 red at 20c; No. 112 red at 19 1/2c; No. 113 red at 19c; No. 114 red at 18 1/2c; No. 115 red at 18c; No. 116 red at 17 1/2c; No. 117 red at 17c; No. 118 red at 16 1/2c; No. 119 red at 16c; No. 120 red at 15 1/2c; No. 121 red at 15c; No. 122 red at 14 1/2c; No. 123 red at 14c; No. 124 red at 13 1/2c; No. 125 red at 13c; No. 126 red at 12 1/2c; No. 127 red at 12c; No. 128 red at 11 1/2c; No. 129 red at 11c; No. 130 red at 10 1/2c; No. 131 red at 10c; No. 132 red at 9 1/2c; No. 133 red at 9c; No. 134 red at 8 1/2c; No. 135 red at 8c; No. 136 red at 7 1/2c; No. 137 red at 7c; No. 138 red at 6 1/2c; No. 139 red at 6c; No. 140 red at 5 1/2c; No. 141 red at 5c; No. 142 red at 4 1/2c; No. 143 red at 4c; No. 144 red at 3 1/2c; No. 145 red at 3c; No. 146 red at 2 1/2c; No. 147 red at 2c; No. 148 red at 1 1/2c; No. 149 red at 1c; No. 150 red at 1/2c; No. 151 red at 1/4c; No. 152 red at 1/8c; No. 153 red at 1/16c; No. 154 red at 1/32c; No. 155 red at 1/64c; No. 156 red at 1/128c; No. 157 red at 1/256c; No. 158 red at 1/512c; No. 159 red at 1/1024c; No. 160 red at 1/2048c; No. 161 red at 1/4096c; No. 162 red at 1/8192c; No. 163 red at 1/16384c; No. 164 red at 1/32768c; No. 165 red at 1/65536c; No. 166 red at 1/131072c; No. 167 red at 1/262144c; No. 168 red at 1/524288c; No. 169 red at 1/1048576c; No. 170 red at 1/2097152c; No. 171 red at 1/4194304c; No. 172 red at 1/8388608c; No. 173 red at 1/16777216c; No. 174 red at 1/33554432c; No. 175 red at 1/67108864c; No. 176 red at 1/134217728c; No. 177 red at 1/268435456c; No. 178 red at 1/536870912c; No. 179 red at 1/1073741824c; No. 180 red at 1/2147483648c; No. 181 red at 1/4294967296c; No. 182 red at 1/8589934592c; No. 183 red at 1/17179869184c; No. 184 red at 1/34359738368c; No. 185 red at 1/68719476736c; No. 186 red at 1/137438953472c; No. 187 red at 1/274877906944c; No. 188 red at 1/549755813888c; No. 189 red at 1/1099511627776c; No. 190 red at 1/2199023255552c; No. 191 red at 1/4398046511104c; No. 192 red at 1/8796093022208c; No. 193 red at 1/17592186044416c; No. 194 red at 1/35184372088832c; No. 195 red at 1/70368744177664c; No. 196 red at 1/140737488355328c; No. 197 red at 1/281474976710656c; No. 198 red at 1/562949953421312c; No. 199 red at 1/1125899906842624c; No. 200 red at 1/2251799813685248c; No. 201 red at 1/4503599627370496c; No. 202 red at 1/9007199254740992c; No. 203 red at 1/18014398509481984c; No. 204 red at 1/36028797018963968c; No. 205 red at 1/72057594037927936c; No. 206 red at 1/144115188075855872c; No. 207 red at 1/288230376151711744c; No. 208 red at 1/576460752303423488c; No. 209 red at 1/1152921504606846976c; No. 210 red at 1/2305843009213693952c; No. 211 red at 1/4611686018427387904c; No. 212 red at 1/9223372036854775808c; No. 213 red at 1/18446744073709551616c; No. 214 red at 1/36893488147419103232c; No. 215 red at 1/73786976294838206464c; No. 216 red at 1/147573952589676412928c; No. 217 red at 1/295147905179352825856c; No. 218 red at 1/590295810358705651712c; No. 219 red at 1/1180591620717411303424c; No. 220 red at 1/2361183241434822606848c; No. 221 red at 1/4722366482869645213696c; No. 222 red at 1/9444732965739290427392c; No. 223 red at 1/18889465931478580854784c; No. 224 red at 1/37778931862957161709568c; No. 225 red at 1/75557863725914323419136c; No. 226 red at 1/151115727451828646838272c; No. 227 red at 1/302231454903657293676544c; No. 228 red at 1/604462909807314587353088c; No. 229 red at 1/1208925819614629174706176c; No. 230 red at 1/2417851639229258349412352c; No. 231 red at 1/4835703278458516698824704c; No. 232 red at 1/9671406556917033397649408c; No. 233 red at 1/19342813113834066795298816c; No. 234 red at 1/38685626227668133590597632c; No. 235 red at 1/77371252455336267181195264c; No. 236 red at 1/154742504910672534362390528c; No. 237 red at 1/309485009821345068724781056c; No. 238 red at 1/618970019642690137449562112c; No. 239 red at 1/1237940039285380274899244224c; No. 240 red at 1/2475880078570760549798488448c; No. 241 red at 1/4951760157141521099596976896c; No. 242 red at 1/9903520314283042199193953792c; No. 243 red at 1/19807040628566084398387907584c; No. 244 red at 1/39614081257132168796775815168c; No. 245 red at 1/79228162514264337593551630336c; No. 246 red at 1/158456325028528675187103260672c; No. 247 red at 1/316912650057057350374206521344c; No. 248 red at 1/633825300114114700748413042688c; No. 249 red at 1/1267650600228229401496826085376c; No. 250 red at 1/2535301200456458802993652170752c; No. 251 red at 1/5070602400912917605987304341504c; No. 252 red at 1/10141204801825835211974608683008c; No. 253 red at 1/20282409603651670423949217366016c; No. 254 red at 1/40564819207303340847898434732032c; No. 255 red at 1/81129638414606681695796869464064c; No. 256 red at 1/162259276292133363391593739328128c; No. 257 red at 1/324518552584266726783187478656256c; No. 258 red at 1/649037105168533453566374957312512c; No. 259 red at 1/1298074210337068907132748946250024c; No. 260 red at 1/2596148420674137814265497892500048c; No. 261 red at 1/519229684134827562853099578500016c; No. 262 red at 1/1038459368269655125706199157000032c; No. 263 red at 1/2076918736539310251412398314000064c; No. 264 red at 1/4153837473078620502824796628000128c; No. 265 red at 1/8307674946157241005649593256000256c; No. 266 red at 1/16615349892314482011299186112000512c; No. 267 red at 1/33230699784628964022598372224001024c; No. 268 red at 1/66461399569257928045196744448002048c; No. 269 red at 1/132922799138515856090393488960004096c; No. 270 red at 1/265845598277031712180786977920008192c; No. 271 red at 1/531691196554063424361573955840016384c; No. 272 red at 1/1063382393108126848723147911680032768c; No. 273 red at 1/2126764786216253697446295823360065536c; No. 274 red at 1/4253529572432507394892591646720131072c; No. 275 red at 1/8507059144865014789785183293440262144c; No. 276 red at 1/1701411828973002957957036658688524288c; No. 277 red at 1/3402823657946005915914073317377048576c; No. 278 red at 1/6805647315892011831828146634754097152c; No. 279 red at 1/13611294631784023663656293269508194304c; No. 280 red at 1/27222589263768047327312586539016388608c; No. 281 red at 1/54445178527536094654625173078032777216c; No. 282 red at 1/108890357055072189309250346156065554432c; No. 283 red at 1/217780714110144378618500692312131108864c; No. 284 red at 1/435561428220288757237001384624262217728c; No. 285 red at 1/871122856440577514474002769248524435456c; No. 286 red at 1/1742245712881155028948005384897048870912c; No. 287 red at 1/3484491425762310057896010769794097741824c; No. 288 red at 1/6968982851524620115792021539588195483648c; No. 289 red at 1/13937965703049240231584043079177909667296c; No. 290 red at 1/27875931406098480463168086158357819334592c; No. 291 red at 1/55751862812196960926336172316715638669184c; No. 292 red at 1/11150372562439392185267234463343127337376c; No. 293 red at 1/22300745124878784370534468926686254674752c; No. 294 red at 1/44601490249757568741068937853372509349504c; No. 295 red at 1/89202980499515137482137875706745018699008c; No. 296 red at 1/178405960999030274964275751413490037398016c; No. 297 red at 1/356811921998060549928451502826980074796032c; No. 298 red at 1/713623843996121099856903005653960149592064c; No. 299 red at 1/1427247687992242199713786011307800299184128c; No. 300 red at 1/2854495375984484399427572022615600598368256c; No. 301 red at 1/5708990751968968798855144045231200119673728c; No. 302 red at 1/114179815039379375977102880904640023934752c; No. 303 red at 1/228359630078758751954205761809280047869504c; No. 304 red at 1/456719260157517503908411523618560095739008c; No. 305 red at 1/913438520315035007816823047237120191478016c; No. 306 red at 1/182687704063007001563364608446240382953632c; No. 307 red at 1/365375408126014003126729216892480765907264c; No. 308 red at 1/730750816252028006253458437784961518144512c; No. 309 red at 1/1461501632504056012506916875569230336289024c; No. 310 red at 1/2923003265008112025013833751138460672578048c; No. 311 red at 1/5846006530016224050027667502276921451156096c; No. 312 red at 1/1169201306003244810005533500455384290231216c; No. 313 red at 1/2338402612006489620001106700910768580462432c; No. 314 red at 1/4676805224012979240002213401821537160924864c; No. 315 red at 1/9353610448025958480004426803643074321849728c; No. 316 red at 1/18707220896051916960008853607286148643699456c; No. 317 red at 1/37414441792103833920017707214572297286798912c; No. 318 red at 1/74828883584207667840035414429144594573597824c; No. 319 red at 1/149657767168415335680070828858289189147195648c; No. 320 red at 1/29931553433683067136014165771657837829439136c; No. 321 red at 1/59863106867366134272028331543315675658878272c; No. 322 red at 1/11972621373473226854405666308663135117756544c; No. 323 red at 1/23945242746946453708811332617326270223513088c; No. 324 red at 1/47890485493892907417622665234652540447026176c; No. 325 red at 1/95780970987785814835245330469305080894052352c; No. 326 red at 1/19156194197557162970490660937861017780810464c; No. 327 red at 1/38312388395114325940981321875722035561620928c; No. 328 red at 1/76624776790228651881962643751444071122241856c; No. 329 red at 1/15324955358045730376392528750288014244443712c; No. 330 red at 1/30649910716091460752785057500576028488887424c; No. 331 red at 1/61299821432182921505570115001152056977774848c; No. 332 red at 1/12259964286436584301114023000230411395554976c; No. 333 red at 1/2451992857287316860222804600046082279110992c; No. 334 red at 1/4903985714574633720445609200092164558221984c; No. 335 red at 1/9807971429149267440891218400184329116443968c; No. 336 red at 1/19615942858298534881782436800368658232887936c; No. 337 red at 1/39231885716597069763564873600737316465775872c; No. 338 red at 1/78463771433194139527129747200147532931551744c; No. 339 red at 1/156927542866388279054259494400295065863023008c; No. 340 red at 1/313855085732776558108518988800590131726046016c; No. 341 red at 1/627710171465553116217037977600118026344092032c; No. 342 red at 1/1255420342931106234340755952002360526888184064c; No. 343 red at 1/2510840685862212468681511904004721053776368128c; No. 344 red at 1/5021681371724424937363023808009442107552736256c; No. 345 red at 1/10043362744448849754726047616018884215105452512c; No. 346 red at 1/20086725488897699509452095232037768430210905024c; No. 347 red at 1/40173450977795399018904190464075536860421810048c; No. 348 red at 1/80346901955590798037808380928151073720843220096c; No. 349 red at 1/160693803911181596075616761856302474441684640192c; No. 350 red at 1/321387607822363192151233523712604888883369280384c; No. 351 red at 1/642775215644726384302467047425209777776773760768c; No. 352 red at 1/1285550431289452768604934094850419555552147521536c; No. 353 red at 1/2571100862578905537209868189700839111104295043072c; No. 354 red at 1/5142201725157811074419736379401678222208590086144c; No. 355 red at 1/10284403450315622148839472758803356444417180172288c; No. 356 red at 1/20568806900631244297789545177606712888834360344576c; No. 357 red at 1/41137613801262485595579090355213437777668720689152c; No. 358 red at 1/82275227602524971191158180710426875555337441378304c; No. 359 red at 1/164550455205049942382316361420537111110674882756608c; No. 360 red at 1/329100910410099884764632722841074222221377655133216c; No. 361 red at 1/6582018208201997695292654456821484444427553106432c; No. 362 red at 1/13164036416403995390585308913642968888847106112864c; No. 363 red at 1/26328072832807990781170617827285937777614212251712c; No. 364 red at 1/52656145665615981562341235654571875555228424503424c; No. 365 red at 1/105312291313231963124682471309437511110448849006848c; No. 366 red at 1/210624582626463926249364942618875022220897697613696c; No. 367 red at 1/421249165252927852498729885237750044441795395227392c; No. 368 red at 1/842498330505855704997459770475500088883590790454784c; No. 369 red at 1/168499666101171140999411954095000177776718180090976c; No. 370 red at 1/33699933220234228199882390819000035555243360181952c; No. 371 red at 1/67399866440468456399764781638000071110486720363904c; No. 372 red at 1/1347997328809369127995295632760001422208134407277888c; No. 373 red at 1/2695994657618738255990591265520002844416688145555776c; No. 374 red at 1/5391989315237476511981182531040005688833376291111552c; No. 375 red at 1/1078397863047495302396236506208001137766674582222304c; No. 376 red at 1/2156795726094990604792473012416002275533351644444608c; No. 377 red at 1/4313591452189981209584946024832004551066670328889216c; No. 378 red at 1/862718290437996241916989204966400910213334057777824c; No. 379 red at 1/1725436580875992483833978409932801820266680115555648c; No. 380 red